VOCATIONAL

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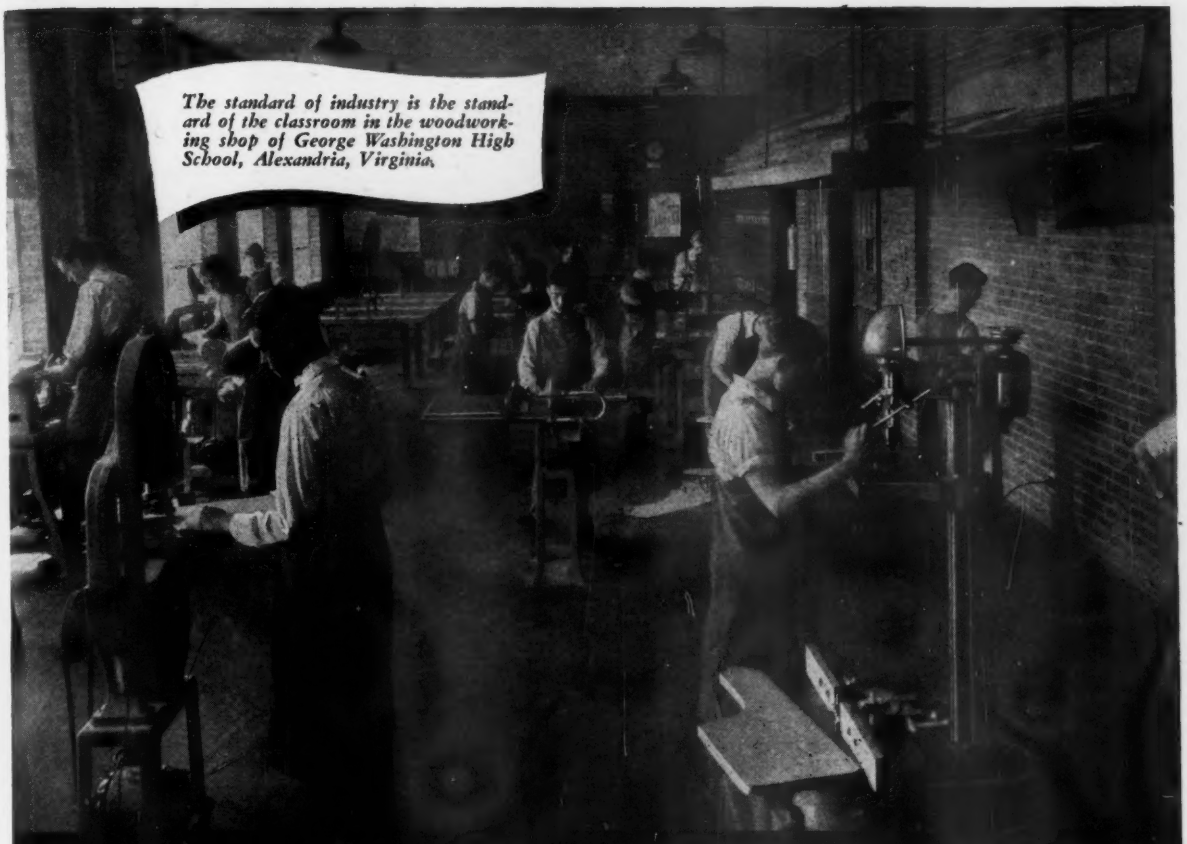

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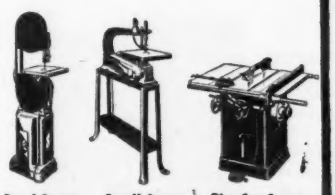

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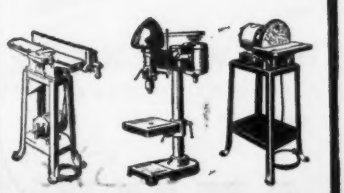

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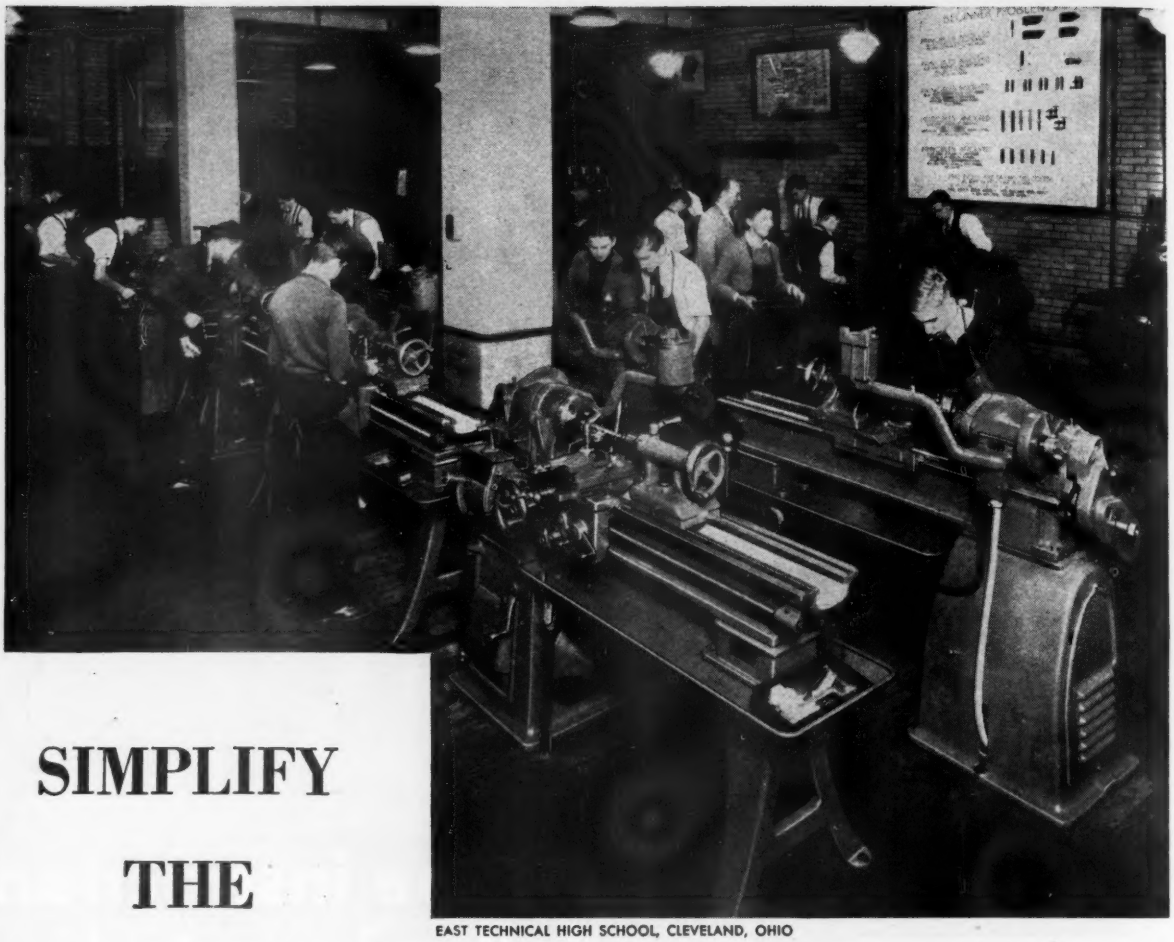

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AMERICAN VOCATIONAL JOURNAL

VOLUME 22 · MAY, 1947 · NUMBER 5

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The Cover

In this scenic spot high in the mountains on the Cooke City Highway to Yellowstone Park, classes get close to nature. This group, enrolled during the 1946 summer session at Montana State College, camped at a Forest Service Camp above Island Lake on one of many such trips. The Rocky Mountains traverse western Montana and within this area lies part of Yellowstone National Park and all of Glacier National Park. In eastern Montana grain and stock-raising are important. A leading copper-producing state, the major industries are connected with metals. H.H.C.

The American Vocational Journal is published monthly, September to June inclusive, by the American Vocational Association, Inc. Entered as second class matter January 29, 1945, at the post office at New York, N. Y., under the act of March 3, 1879. Contents are copyrighted by American Vocational Association, Inc. All members of the American Vocational Association, Inc. receive the Journal. Membership applications should be submitted through State Vocational Association secretary. Subscription prices for libraries and non-members $2.00 a year, single copies 25¢. Executive offices at 1010 Vermont Avenue, Washington 5, D. C. Advertising, editorial and production headquarters are at 220 East 42nd Street, New York 17, N. Y. This is the official publication of the AVA.

American Vocational Association, Inc.

American Vocational Association, Inc., advances American Education by developing economic competence of youths and adults. The Association promotes the professional interests of persons engaged in vocational and industrial arts education. It encourages full-time and part-time programs in these fields: Agriculture, Home Economics, Business and Distributive Occupations, Industrial Arts, Industrial Education, Rehabilitation, and Vocational Guidance.

★

A Problem for Veterans*

THE stampede of war veterans into colleges and universities may contribute to a serious shortage of skilled craftsmen in vital industries a few years hence.

This possibility is highlighted by comparison of statistics available from colleges and from the Apprentice Training Service of the Department of Labor.

Upwards of 1,000,000 ex-GI's who entered college last fall are enduring incredibly overcrowded classroom and dormitory conditions. At the same time, industry needs an estimated 500,000 young men and women for industrial training if the nation is to maintain a working force of about 5,500,000 skilled craftsmen.

Why is the nation's industrial training program failing to attract more ex-service men and women?

Part of the blame lies in the failure of industry to dramatize the opportunity for advancement that exists in our expanding postwar economy. Another partial answer stems from the widespread feeling among youth that the possession of a college degree endows the holder with a magic key to success and automatically imparts high social prestige. A third reason is perhaps a misunderstanding of the historic role of the apprentice in industry and failure to comprehend the benefits of apprenticeship training.

The Apprentice Training Service has for almost 10 years extended the fullest cooperation to any employer interested in establishing and improving such programs. Upwards of 46,000 industrial firms now are cooperating in training apprentices, but that total might well be doubled to meet present and future needs.

The work of the apprenticeship agencies has resulted in a flood of applications for such training in soundly conceived programs, including the more glamorous trades such as aviation and electronics.

Examination of the benefits of the program shows that veterans taking apprentice training gain some immediate advantages over those who elect to enter college. The courses require approximately the same time—four years. While in training the apprentices derive the same GI benefits; upon completion they are practically certain of good paying jobs.

Where the apprentices have a real advantage is in the matter of immediate earnings. The collegians find their daytime hours taken up by classes and must rely for supplementary funds upon part-time jobs in college areas teaming with other young people looking for the same thing. The apprentices are paid regular weekly wages under a formal agreement with their employers.

From the standpoint of prestige alone, apprenticeship training is one of the most ancient and honored systems prevailing throughout industries requiring unusual skill. Today's apprentices are the legatees of the influential medieval guilds of such artisans as jewelers, watchmakers, and workers in precious metals and valuable commodities.

I do not want to disparage college training. The influx of ex-GI's to colleges is a sociological development that holds infinite promise for the nation.

Business, however, would do well to present the points in favor of apprentice training in a planned apprentice recruiting program and to emphasize that courses for apprentices are as definitely planned and presented as the average college course.

I know of no better way for an ambitious youth to gain economic security than by acquiring a skilled craft that no one can take away from him. I know of no better way for industry to demonstrate the value of initiative than to establish and maintain sound apprentice training programs.

William L. Batt

Member, Federal Committee on Apprenticeship
President, SKF Industries, Inc.

*Courtesy North American Newspaper Alliance

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FRANK C. MOORE
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Improving Instruction in Industrial Arts

Frank C. Moore

Methods May Be More Important Than Content

IN order to have a common background and understanding, in speaking of industrial arts, it is necessary to first define the term.

"Industrial arts is one of the practical arts, a form of non-vocational education. It has for its purpose giving information about and experience in the use of tools, materials, and processes incident generally to the home and the manufacturing industry."

To amplify the definition a little, and be sure the major points are interpreted alike by all, first it is a "practical art," and being a practical art it is definitely a phase of general education. Secondly, it is non-vocational, in that it is not attempting to do the job set up for vocational education. Industrial arts is general education and in no way interferes with vocational education, but is the foundation on which a sound vocational training program should be built. Third, it has for its purpose "information about and experience in the use of tools, materials, and processes." Seventy-five per cent of all time students spend in the school industrial arts department should be working time, and the remaining 25 per cent should be for discussion of problems and for demonstrations of procedures to be taught.

Continuing with the definition: "incident generally to the home and the manufacturing industry." How the home and manufacturing industry should be brought into the school shop curriculum will be considered later. First, consider who takes industrial arts. All boys and girls interested, regardless of intelligence, have an opportunity to learn through industrial arts training. There is definitely a high correlation between skill and intelligence. The repetitive type of shop work is a means of expression for some boys and girls, and may be for those pupils a real means of expression, possibly the first they have ever had in the school curriculum.

Industrial arts is not education given for the specific purpose of definite trade instruction. When properly taught it is the foundation on which an intensive trade education must be built.

To define teaching:

Teaching is occasioning those activities in the mind of the learner which result in knowledge, power, and skill.

Teachers of industrial arts must select from the vast field of knowledge that which is important, that which is useable, and above all that which fits into the child's experience and falls within his ability to understand and use.

"Power" is the ability to use this knowledge in the solution of worthwhile practical problems. "Skill" is the ability to use knowledge and power effectively and efficiently.

To accept the definition of industrial arts and the definition of teaching as given here, is to set up our job in shop work.

Industrial arts properly taught offers the medium for real exploration and guidance. The tools, materials, and processes must be explored in terms of boy interest, in terms of mechanical aptitudes, in terms of adaptability. School shops must have more areas of work—more work with plastics, more electrical work in junior high school, a craft shop in every junior and senior high school for boys and girls to elect who are not interested in taking further unit shop industrial arts instruction.

Teachers must determine in their own minds what they are exploring: Is it the boy? Is it industrial possibilities? What is this exploration for? It should be definitely for the purpose of giving boys and girls a background for their proper educational choice.

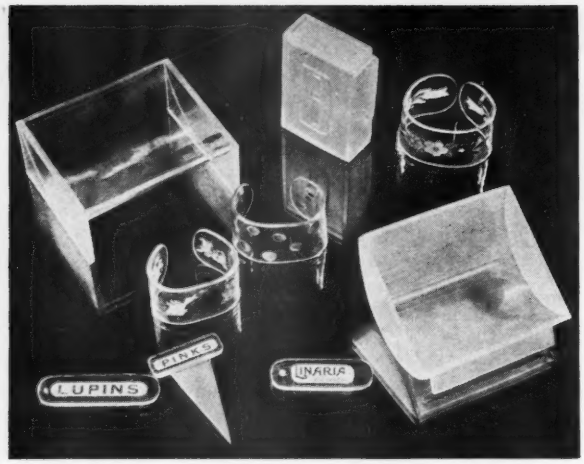
Records must be kept which can follow the pupil from year to year, so that each teacher will have the benefit of what previous teachers have learned in terms of the boy's or girl's potential possibilities.

Certainly the correct usage of all tools must be taught in the shops. Tools, materials, and processes, as well as machines, should only be used at the time in the boy's development when he has the ability and power to do a good job with the equipment available.

What should be taught about materials?

Something about the history and manufacture, the quality of various materials, the limitations and the substitutes found for given materials.

In connection with the processes, the shaping and forming of materials, the cutting, drilling, joining, and finishing are the fundamental processes which should be taught in connection with all material used in school shops.



Industrial Arts shops well might include more plastic work

It is important to teach what a machine is supposed to do, the care, maintenance, and lubrication of the machine, and how the pupil can use machines properly and safely. There is a safe procedure for using all power equipment. Understand where the power comes from, how to turn it off and how to turn it on; understand definitely what the machine is supposed to do and how it is adjusted in order to complete a given job. Understand how to maintain the machine, how to lubricate it, and be familiar with all safety devices in connection with its use.

One of the major objectives of shop work is to teach pupils something about industry and how industry functions. Show how an industry is formed in terms of stockholders, directors, officers, management and workers, and the necessity for and purpose of each, in order to live and progress in an industrial society.

Understanding the manufacturing process involved in manufactured products, it is possible to appreciate those products far better than without this knowledge.

A good consumer is an informed buyer and a trained user. The shop department is trying to make good consumers for the world's goods.

People must interpret their wants in terms of specific needs and specify for themselves that which they wish to purchase which fills a given need. They must understand how to judge and compare similar articles made by different manufacturers. They must understand and develop standards for comparison and purchase. They must understand how to properly use an article after it has been purchased. They should understand how to repair and maintain this article for efficient use. Above all, they should understand their limitations, as to when repair is impractical in terms of their abilities and tools and machines available. Last, they should be able to determine when an article has become obsolete and impractical in terms of repair and should be replaced.

There is one phase of shop work now being experimented with, which never has been a definite part of the curriculum. This experiment has been set up, has been worked on for some time, and material will be issued for use in the whole system which will give students a picture of what actually takes place in a manufacturing industry.

An idea comes into a manufacturing industry for a new product or a production change. What must industry do in order to undertake the production or the cancellation of this idea?

First, it must determine the possibility of manufacture within the organization with the present equipment and the present types of skills. It must see at what price it can be manufactured. It must see the distribution difficulties and the potential sales possibilities.

After deciding to make the new product, it is necessary to design and work out for production in the engineering department the complete production from beginning to end; to draw in detail all the necessary working drawings which are to be sent throughout the factory for the production department to follow. Drawings are sent to the pattern shop where wood or metal patterns are made when castings are desired. From the pattern shop the patterns are sent to the foundry where castings are made. Castings are delivered to the machine shop where the necessary cutting and machining is done. The various parts are then sent to the assembly department where they are given inspection before assembly, and then given the final inspection before the product is ready for distribution.

In giving this as a part of a course, a boy is enabled to understand industry and industrial processes and to choose his place as an industrial worker or manager. Most difficulties are caused by people who do not understand the function of other people's jobs in the whole economic and social structure, and through information about industry and industrial processes it is possible to sow the seeds of proper relations between management and labor.

The second part of the definition of industrial arts has to do with the home. Somewhere along the line, industrial arts educators may have forgotten the home and the possibility of the home as a factor in the selection of projects and the selection of processes to be taught in school shops.

Some courses are taught under the heading of "consumer architecture." These are cosmopolitan high school courses and are being received with a great deal of interest. They start with the planning of a summer cottage, a one-room cottage, go into the home planning for an ideal five-room home, and then how the planning of a home affects the purchase of furniture, the study of exterior finishes and types of architecture, the study of new materials, new and good construction, insulation, types of storm windows, heating plants, etc.

This is a phase of bringing the home to the school which in many cases is far more important than the type of drawing originally taught.

For the average child, there are only two reasons for teaching drawing in school shops: to be able to interpret the ideas of others as given through a drawing, or to be able to interpret your ideas to others through the medium of a drawing. The type of drawing taught in school shops has been changed from so much instrumentation to more free-hand and straight-edge drawing.

It is necessary to foster and cultivate hobby possibilities in the home in terms of shop work if pupils ever are to have an interest in home work shops.

Home work shop benches possible of construction with the ordinary tools found in the home must be developed in school shops. Design and construct storage facilities for tools and materials. Design and offer suggestions for mounting home work shop machines so that they are safe in the home and possible of being used to their full potential powers.

How this will be done is a question. Unless an interest is taken in the home work shop while the boy

is in school, the possibility of developing such an interest is remote during school age.

This leads directly to hobby possibilities in connection with industrial arts. A definition of a hobby (which will not meet with the English Department's definition) is *that thing you can't wait to get to doing, not that thing you do in leisure time.*

The hobby idea should be fostered; there should be hobby exhibits. It may be necessary to loan tools so that pupils can use them at home. Most people do not follow a hobby who do not understand the fundamental techniques involved in producing good results.

Perhaps junior high schools should not be so fully equipped with machines; perhaps more emphasis should be placed on hand tools and hand tool processes.

All school shops use new wood, but when a boy gets out of school he seldom uses another piece of new wood all the rest of his life. Probably the shop should be teaching reconditioning of woods and refinishing of woods in order for a boy to understand how to use the the product with which he will come in contact after leaving the school shop. In connection with hobby work, it is possible to do something with repair, refinishing, and painting of home furniture both inside and out. Something could be done about simple repair of floors which are badly injured in just one spot; something about fitting storm windows; something about taking care of simple plumbing repairs. These things may never be a hobby with some people but the techniques required and the results in terms of domestic tranquility may make them one of the most desirable of industrial arts possibilities.

Consider next industrial arts at the technical high school level.

Based upon experience in Cleveland, it appears that the transfer of training in skills is very high; that specialization is not necessary during the accepted public school period of instruction; that seldom are skilled mechanics made in school shops. But the background for making skilled mechanics is one of the great functions of a good industrial arts program.

It is necessary for pupils to explore all the materials and machines and tools and processes possible during their early industrial arts experience. But specialization in the field of industrial arts should be specialization by larger areas rather than by specific and pigeon-holed activities.

An ideal set-up after the exploration period has been properly conducted is a set-up at the upper secondary level where an extensive industrial arts program is offered. There should be three fields with maximum opportunities for specialization. One would be the field of mechanics and manufacturing, which would include opportunities for intensive study of the tools, materials and processes, as well as intensive practice in the techniques involved in drawing, patternmaking, foundry, and machine shop. A boy choosing this field would previously have experienced all those activities in a well-rounded junior high school industrial arts program, but would now take more intensive training, especially in that area in which he shows the greatest adaptability, interest, and potential possibilities.

The second field would be the power field, including areas in drawing, electricity, auto mechanics, and aeronautics, which would include sheet metal and welding. In the junior high school a boy would have had some experience in some of these areas, but not many. In his senior high school he would have an opportunity to specialize, with emphasis on that area of the power field which seemed to fit his adaptabilities, etc.

The third field would be graphic arts, including drawing, with special emphasis on design and layout from the art and industrial arts standpoint. Color, harmony, balance, and all the requirements for good artistic arrangement would be included; bookbinding, silk screen, offset press, composition, and platen press work.

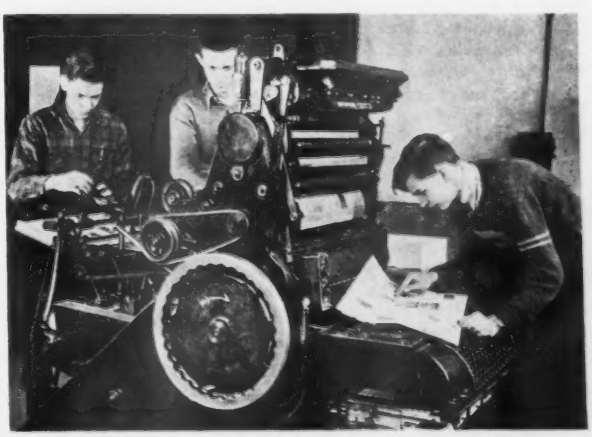
While this is entirely new to most industrial arts secondary programs, it has untold possibilities and if accepted would be accepted by boys, teachers, parents, administrators, industry, and the vocational people as giving to the potential worker that background which is fundamentally sound and which will give the boy an opportunity to develop in a specialized area by having a complete background in the field which he will follow.

Finally, consider the teacher and his responsibility.

Too much time often is spent on several minor phases of content with little regard for usage in terms of the pupil. Too much time is spent on minor tool techniques which seldom are used, on instruction which seldom functions, on drawings which aren't understood, without realizing that the teacher is losing for himself and his work a great majority of his opportunities. Teachers must be sure that they select from the vast field of content that which is important, worth while, interesting; that which can be accomplished at a given grade level; that content which is best taught in an industrial arts shop. The way in which this is taught, the method used, may be far more important than the content itself. Most people remember more about the person who taught them about some incidental happening which changed their lives and attitudes and philosophies than they do about about specific content.

Industrial arts offers one of the finest opportunities for the development of real citizenship, for the development of real workers, for the understanding of the value of time, for the development of a cooperative attitude by working with common tools and on common machines on common projects in an informal atmosphere; but we must be sure that we are using all of our potential possibilities in terms of making subject matter all that it should be in the curriculum.

Method is an important part of teaching. Tools, machines, projects, and materials accomplish little except when they follow a good teaching technique, a good procedure, a well-organized class, a well instructed class, and some form of evaluation so that instructor understands the results he is attaining.



Graphic Arts is a field for development on secondary level

High School Skill Subjects

Business Education Department Heads Express Opinions on Teaching Skills in High School or on College Level

J. H. MORROW
Department of Business Education
Syracuse University

IF A student wants to become a commercial teacher, should he study skill subjects in high school?

There is no definite answer to this question in business education today. It is recommended, therefore, that business educators consider the various aspects of this question with the possible result being a step toward bridging some vulnerable gaps.

As a result of talking with teacher trainers, secondary and college administrators, and high school commercial teachers, a wide variance of opinion was found on the subject of whether or not a high school student should study skill subjects in high school if he wants to become a commercial teacher. Since no research was available, it was decided to contact department heads in teacher-training institutions. A form letter and questionnaire were mailed to the Business Education Department Head in each of the 92 institutions holding membership in the National Association of Business Teacher-Training Institutions in 1942-43. The department heads were asked to indicate the research which was conducted if their answer was based on facts. One respondent indicated that his answer was based on facts collected in his department during the past four years. All other answers were opinions based on experience and observation. Sixty-two per cent of the questionnaires were completed and returned. These 57 department heads may rightfully be classified as an expert jury on this question.

The answers which may be classified have been tabulated. Three groupings are necessary in order to evaluate the material. First, the replies of department heads who said, "yes, the high school student who wants to become a commercial teacher should study skill subjects in high school:

1. Yes, because of the exploratory values. Skill training in high school helps a student to decide whether or not he wants to become a commercial teacher. Exploratory time is less costly in high school than in college.

2. Yes, opportunity is provided to gain practical experience at an early age. Since commercial teachers should have all the work experience possible, it is well to secure the tools in high school.

3. Yes, college time may be devoted to general education.

4. Yes, skills well learned in high school are excellent foundation for further skill training.

5. Yes, many good commercial teachers get their inspiration and incentive to become teachers of business through their liking for high school business training and their high school commercial teachers. The profession greatly needs to recruit such potential teachers. It gives the teacher a chance to propagandize for teaching—a good thing if the teacher will do some recruiting.

6. Yes, skills may come easier at the high school level.

7. Yes, if college will exempt him from the fundamental equivalency of his high school work and enter this information on his college transcript. This would give him more time in college to take background courses in such fields as finance, marketing, and management which he should have as a high school teacher in order to broaden his basic knowledge of the field of business and be able to do a better job of counselling and guidance. One of the greatest weaknesses of high school teachers is that they are too narrow in fundamental business information.

8. Yes, because the incentive to excel in special skills is stronger on the high school level than it is in general education on the high school level.

9. Yes, learning over a long interval of time with plenty of rest periods between learning periods stays with us better than learning done in short, intensive periods. Shorthand and typewriting must become a part of the individual's tool equipment—like English or handwriting.

10. Yes, provides a proficiency and a confidence not common to those students who begin their study of skilled subjects in college.

11. Yes, useful in assisting to defray college expenses.

12. In our school (teacher-training institution) students do not begin work in their major until their junior year. They may take typewriting without credit in the freshman year and shorthand with credit in the sophomore year if they have not previously had this training. However, the addition of these two subjects adds an additional load to their already heavy program.

13. Yes, if this does not prevent him from getting a sound general education in high school.

14. Mastery of skills requires long practice under close teacher supervision, and under self-supervision with a view to improving the skill. It ought to be under competent instruction, however, for bad habits of practice have a way of fixing themselves permanently. Years of use of a skill tend to fix the speed and accuracy with which it is performed.

15. Yes, enables student to become familiar with certain high school curriculum and equipment problems. This background will prove valuable later in making comparisons in advanced college classes.

16. Makes it possible to select students who have demonstrated proficiency and interest in these courses before they embark upon a teacher-training program.

17. The college student is not willing or not able to give the time and effort necessary to develop the skills properly. Most colleges give limited credit for the skills and college students put their efforts to the courses for which they receive credit.

18. It is desirable for a student to complete one year of typewriting in high school. Further work in typewriting and all work in shorthand may be taken in college.

19. If a student waits until college to take the subjects which he expects to teach in high school, there is danger that he will try to carry the college level back to the high school or at least he will have a difficult adjustment.

20. Provides first knowledge of the commercial subjects in the type of school where he will teach; surrounded by the conditions under which he will teach and in classes composed of individuals such as he will teach. His college training in the skill subjects will augment his previously acquired knowledge, giving him two insights into the material.

IN THE above statements, numbers 1 to 11 are listed in the order of their importance, determined by the number of times they were mentioned by the respondents. Statements 12 to 20 were each mentioned once.

In the original letter mailed to the 92 department heads, it was stated that "No reference will be made to the specific opinion of any individual." In the questionnaire on which responses were made, the following statement was included: "Sign your name only if you wish to do so." It is believed that each department head stated his opinion very freely.

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Pole Top Classes

Training for Rural Electric Line Crews Keeps "Juice" on and Prevents Accidents

Safety and Job Training Instruction important in REA Cooperative training program in Texas

WHEN the Rural Electrification Administration made loans available for Rural Electric Cooperatives to take electricity to their farm members, the job was only begun. REA engineers designed suitable standards and specifications for construction. Manufacturers provided materials and equipment to meet specifications. But someone had to get the lines to the farms. Surveys had to be made, easements secured, trees trimmed and cut, brush removed and right-of-way cleared, temporary bridges and roads built, holes dug, poles hauled and framed and raised, wire strung, transformers hung, installations inspected, meters connected, and the lines energized.

Then came the ice storms and hurricanes as well as the usual wear and tear maintenance. This work requires line crews. Every Cooperative has to have one or more crews of men, ranging from four to 30 in number. Former farm hands and town boys make up the crews and "clumb-some" linemen were hired as foremen. Practically all needed some training. Line crew work not only involves many skills but is extremely hazardous.

In many states, REA Cooperatives organized "Safety and Job Training Committees" to cooperate with the Trade and Industrial Education officials in the organization of training programs for line crews. In Texas the program was placed in the Industrial Extension Service of the Agricultural and Mechanical College of Texas, in cooperation with the State Board for Vocational Education. This program was called "Job Training and Safety for Rural Electric Line Crews."

"Job Training" was placed first because most of the training is given on the job; the instructors do actual training and are not merely safety inspectors or safety supervisors. If the job is taught correctly it will be the safe method.

The Texas program started in January, 1942, with two instructors. There are now four full-time men. Three have definite itineraries planned for each month; the fourth has an itinerary of three weeks and spends the fourth week of each month coordinating and supervising the work of the other three, or handling special problems. Each instructor travels about 1,500 miles per month and meets with each crew assigned to him one full day each month. Two to four hours of the day are devoted to class or group instruction. The remainder of the day is spent with the crew in the field, giving such instruction as is found necessary on the respective jobs or operations. Each of these instructors had at least seven years' experience as a lineman and two years as a foreman before he was selected for this job. There now are about 1100 men in 70 groups receiving this training.

Whenever an emergency arises in any of the Co-op systems the instructors are among the first notified. Other Cooperatives send crews, equipment, and material into the stricken area. The instructors assist the local managers in studying the damage and then assigning crews, material, and equipment to the most urgent parts of the disrupted systems. Each instructor is assigned to certain groups. It is his job to give instruction when and where needed in the methods and safe procedures of repairing the broken poles, cross arms, and lines in the quickest and safe manner, and to coordinate the crews so that electric service may be restored as soon as possible.

Service is first restored to dairies, hatcheries, and other users who produce food for Army installations and towns. A dairy of 500 cows depending upon electric milkers is "in a bad way" when the electricity is out. Cows cannot wait and there are not enough "hands" in the community to do the job. Electric "setting hens" (incubators) and "mothers" (brooders) can lose a lot of chicks in a hurry when the "juice" goes off.

In one North Texas ice storm, four Co-op systems and 3,000 miles of line were involved; 250 men were organized into coordinated crews. An East Texas Co-op had 700 miles of line out of service from one storm; 112 men repaired the damage. A Gulf Coast hurricane hit 2,000 miles of the lines of four Cooperatives. Only 78 men had all the Co-op members getting service in seven days. To date there has not been an accident on one of the emergency jobs.

Since V-J Day, there have been approved and started thousands of miles of construction which will keep crews busy for some time. Emergency and new construction work might be considered as urgent and "boom" jobs, but the regular maintenance and opera-

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Trade Tests

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Industry Could Save Time and Money Vocational Schools Could Measure a Student's Readiness for Graduation

INDUSTRY long has been dissatisfied with the manner in which it looks over its applicants and decides on the selection, placement, transfer, and promotion of employees. What is urgently needed is more detailed information concerning the proficiency of each employee and prospective employee. Some means of determining objectively the degree of proficiency of each person working in industry must be found in order to stop the alarming increase in labor turnover, and costs of hiring, assigning, transferring, and training those kept by an employer.

During World War I, it was found that the bluffer in industry did not change when he entered the Army. When shipped to France, men failed to have the trade skills which they had claimed when in Camp. It became necessary to set up some method of accurately determining the trade ability of the many men who were entering the Army. This was where trade testing received its first big impetus. Developing and standardizing oral trade questions has been one of the major research problems of the Worker Analysis Section of the Occupational Research Program of the United States Employment Service.*

A trade test is an achievement test which has been designed to find out the level of a person's proficiency in a certain trade or job. It never was intended that it should test aptitude.

TRADE tests can be of four varieties—oral, written, picture, or performance. Each type has its advantages and its disadvantages. No matter which type of test is made, certain requirements should be satisfied. These are as follows:

1. The test should indicate with considerable accuracy the grade of skill possessed by the person being tested.

2. The test must be concise and simple enough so that any person of ordinary intelligence may administer it and obtain satisfactory results after very little training.

3. The test must be constructed according to the practices of the trade in the particular community in which it is to be used.

4. The test should test the ability possessed by the applicant at the time the test is given.

A trade test aims to test skill or proficiency in the shortest time possible. A very intricate experimental process must be gone through to compile this trade proficiency, which consists of the mass of common trade information as well as the ability to perform the operations of the trade. A trade test, then, is not a set of questions thrown together at random, but, rather, involves the most rigorous application of scientific method.

The four different types of trade tests—oral, written, picture, and performance—will be discussed further and advantages and disadvantages of each will be cited in an effort to clarify the values of each, and where each would be used.

Only insofar as information is the reflection of experience in the trade will the question method, oral or written, give any indication of skill. To many foremen, a workman is a bundle of mechanical skills and is unable to answer questions about his work. However, if the questions are skillfully worded in the language of the shop and concerned with familiar processes it will be found that most workmen who can perform the operations are able to talk in trade terms. At best, though, skill is measured only indirectly by an oral test. It is the theorist who thinks that the knowledge which the ordinary workman possesses is the result of intellectual toil by midnight oil. For 99 percent of the workman, it has been gained by experience and not through books.

BY USING newer methods of wording questions, it has been found that a few oral questions at the time of the first interview will aid a great deal in discovering whether the job applicant is bluffing or "knows his stuff."

Job analysts of the Occupational Research Program were placed in direct contact with different jobs so that observation of a job would give them the necessary information from which to formulate trade questions. Questions calling for a specific answer were couched in the language of the worker, covered as wide a range of job activities as possible, and were designed to bring out the fundamental aspects of the occupation. Foremen, supervisors, and skilled workmen were able to offer valuable information regarding questions that dealt with the principal operations of a trade. These questions were then sent to headquarters for review and verification. A number of thoroughly skilled workers in the occupations took part in this verification.**

The picture test is an attempt to get nearer to conditions under which a trade is performed. No actual processes are shown, but all the tools and machines are illustrated which helps to make the examination seem less abstract and so establishes confidence in the men taking the test. To a foreigner or a person with a language handicap, this test would be the most understandable. It makes it possible to present more detailed questions than the oral test. The greatest disadvantage was that pictures taken from trade catalogs often did not conform to practice in a shop. Simple differences in machines were not easily understood and seemed to confuse the testee.

The performance test is nothing more than a standardized practical trade job, involving the use of blueprints, materials, and tools characteristic of the trade.

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*Stead, W. H., Shartle, C. L., and others, *Occupational Counseling Techniques*. New York. N. Y. American Book Co., 1940.

**Op. Cit.

"We Learn to Earn"

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META VOSSBRINK
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Homemaking Students Combine Study with Work Experience

"WE PLAN, we experiment, we evaluate," have been weighty issues with the Homemaking III students of Napoleon, Michigan, and seemingly have paid full dividends for their venture in work experiences.

A unit in "Vocations and Careers" found its place on the yearly calendar and advanced students were eager to try something new in the aspect of approach. Why couldn't they investigate the kinds of employment that graduates of Napoleon High School were engaged in, and locate the phases of homemaking that these graduates found of real value in their chosen vocation? As the advanced students exchanged ideas a plan evolved: why not create a questionnaire and send a copy to every girl graduate for the past five years? This was accomplished. Along with the checking device a letter was enclosed explaining the purposes and objectives: (1) to become acquainted with the vocations chosen by the graduates, (2) to learn how much additional training was needed, (3) to locate the areas of homemaking which most frequently benefited the girls.

Sixty-two per cent of the forms were returned and interesting information gathered. A brief review of the data is valuable in supplying an over-all picture of job analysis.

Class of 1940: 17 girl graduates, 7 questionnaires returned. There were 10 homemakers, 2 office employees, 1 teacher, 1 WAVE, 1 beauty operator, 1 factory worker, 1 doing housework for parents.

Class of 1941: 8 girl graduates, 5 questionnaires returned. There were 4 homemakers, 2 WAVES, 1 secretary, 1 factory worker.

Class of 1942: 19 girl graduates, 9 questionnaires returned. There were 9 homemakers, 2 office employees, 2 WAVES, 2 factory workers, 1 teacher, 1 married and factory worker, 1 married and changing jobs.

Class of 1943: 7 girl graduates, 4 questionnaires returned. There were 3 homemakers, 2 office employees, 1 WAC, 1 factory worker.

Class of 1944: 9 girl graduates, 8 questionnaires returned. There were 2 student teachers, and 1 each engaged as secretarial student, student nurse, factory worker, office employee, clerk, waitress, at home.

Class of 1945: 11 girl graduates, 11 questionnaires returned. There were 2 married and working in a factory, 2 clerks, 2 office employees, 2 at home with parents, 1 secretarial student, 1 telephone operator, 1 factory worker.

The list of units in homemaking most frequently mentioned was interesting to both present students and the teacher: Personality development including grooming, house furnishing including interior decoration, meal planning and nutrition, meal service and etiquette, consumer buying, food preservation, clothing renovation, clothing construction including children's garments, home management, marriage and family relationships, child development.

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Classroom study was followed by actual work experience, and new emphasis on program

Increased mechanization of agriculture points to one training area

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Present Program Must Be Extended, Individuals Enabled to Maintain Themselves in a Farming Business

Vocational Agriculture's Next Steps

FOR several years educators have been talking in terms of a total program of vocational education. The time is ripe to take stock and point programs of vocational education to meet changing conditions.

During the war years, instructional programs for vocational agriculture were pointed to meet emergency needs in the "Food Fights for Freedom" program. This change in purpose was due in part to the demands of the time and to the heavy inroads made upon farm youth and out-of-school rural young men through entering the Armed Services and war industries. The successful operation of the wartime program in an all-out effort to fight a total war, is history.

Many and complex have been the effects of war upon programs for agricultural education, the effects of which will be felt for years to come, in fact.

1. The production of most farm commodities reached an all-time high. A peacetime economy points to readjustments as to the character and amount of farm production and the prices of farm commodities. To effect the readjustments confronting agriculture, education must play an important part.

2. The general price level rose sharply during the war and in the opinion of most economists, will reach its peak by mid-summer, 1947. The price adjustments that follow World War II are of significance to vocational agriculture in providing programs of systematic instruction designed to aid young men who have returned from the Armed Forces and from war industries in becoming established in farming upon a basis to avoid the tragedies following in the wake of falling prices.

3. Farm youth and other farm workers left the farm in tremendous numbers to enter war industries and Armed Services. Many new farm operators and farm workers are needed in the postwar period. Most of them will be relatively untrained. Of the male enlisted personnel, more than 50 per cent had only one to four years of high school training. Educational programs have a challenging contribution to make in the establishment or reestablishment of young persons in farming.

4. Marked progress was underway near the outbreak of the war toward rural electrification. This service can be expected to make rapid expansion during the postwar period and bring with it many problems requiring training.

5. Some other problems might be mentioned such as mechanization, deterioration of farm buildings, shifting of types of farming, the increase in the size of farms, deterioration of farm machinery and the increased necessity for making timely repairs, and the decreasing proportion of the population necessary to agricultural production.

From 1918 to World War II, the program in vocational agriculture emphasized three types of classes designed to meet the needs of three groups; namely, the in-school farm youth, the out-of-school rural youth, and the adult farmer group. In scope, the program reached approximately one-third of the needed beginning farmers and was available to not more than 10 per cent of those established in farming.

Evidence points to the need to greatly expand and broaden the program in vocational agriculture to reach greater numbers in these groups, and also to provide instruction for farm workers and part-time farmers.

An accepted objective to be used as an effective guide in the development of training programs for the several groups would be to develop an individual's ability to establish and maintain himself in farming.

In the final analysis, it is logical to conclude that to attain this objective to the fullest extent requires:

(1) The further expansion of the program of vocational agriculture to achieve the goal that all entrants into farming have access to and available, four years of pre-service training in high school (all day classes); (2) further development of young farmer class instruction to provide follow-up and continuation training during the critical period between high school and ultimate establishment in farming on a satisfactory basis; and (3) the further extension of year-round organized adult farmer programs to all centers within the community to provide opportunity for all adult farmers to keep up-to-date in their farm training.

Again: the time is ripe for action pointing toward the development of functioning programs of vocational agriculture for every rural community.

The NAVY'S *Vocationally Trained Non-Veteran* Reserve Program

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Mechanization of Navy Requires Trained Men

FOR generations before World War II, the Navy was a wholly volunteer organization. It was also virtually self-contained. Youngsters who felt the lure of the sea enlisted, often with the idea of making the Navy a lifelong career. They "signed on" as apprentices. Any instruction they required for advancement to higher rates was given aboard ship, and then supplemented by a variety of schools ashore. The Navy thus conducted its own vocational training.

In World War II, the Navy grew to nearly 3,500,000 men, hundreds of whom were draftees. The Navy tried to utilize the civilian skills of these, but it had to conduct, necessarily, an enormous vocational training program to fit them for efficient services.

Now that the war is over and the Navy is approaching a peacetime basis, the problems of preparedness are being reviewed in the light of experiences and in connection with many vital forces that never before have been so important. Among the latter is the unforgettable consideration that the time element in modern war has been reduced to a point where even a very powerful Navy simply may not have time to get ready, in terms of previous concepts of preparedness, before being overwhelmed.

Specifically, modern Naval equipment is becoming increasingly complicated and involved and technically exacting. The time required to train Navy technicians will no doubt increase in proportion with the complexity of the material. However, if the time necessary for this training cannot be spared, obviously advance training must be provided as a measure of preparedness during peace. Since the Navy is being reduced to a minimal regular establishment, this kind of preparedness must also be applied to a substantial body of potential Naval personnel outside the Navy itself; thus the Naval Reserve. It is apparently Congressional policy to make it possible for the Navy to do so.

THE utilization of civilian skills and training is an obvious means of attaining a skilled reserve and the postwar Naval Reserve policy therefore began with the enrollment in the Reserve of Navy veterans, to capitalize on their skills and experiences. The first extension of invitation to others to join the Reserve grew from a series of conferences with leading officials and members of the American Vocational Association, to include the Vocationally Trained Non-Veteran Reserve Program, as announced at the National Convention of the American Vocational Association, December 4, 1946.

(It was necessary at the same time to extend enlistment opportunities to all young Americans in the same age group, a step determined as the Vocational Program was about to be announced. The Vocational Program, however, has been emphasized as one of special value, and has been given special attention by the Navy Department.)

A measure of the Navy's interest in vocationally trained young men is indicated by the special provision applied to that part of the Reserve Program at a time when the Selective Service Act was affecting thousands of young men every month. This special provision allowed a limited number of selected vocationally trained youths to serve on active duty in the Navy in lieu of the period they would otherwise have to serve as draftees. Through their Naval service the Navy would benefit, and the young men would also profit through the maintenance and development of their vocational skills.

As this is written, the draft law is about to expire, so the immediate impact of this provision is not so strong. However, the major consideration which made this program appeal so strongly to vocational educators and their students still are valid.

CONGRESS is discussing the Universal Military Training bill. If this becomes law, young men will be compelled to receive training under the Army or Navy. Under these circumstances, thousands of young men who prefer Naval service might find the Naval quotas of their Induction Boards already filled. Membership in the Reserve is the best assurance of Naval service if universal military training is adopted, or if the international situation should eventually require re-enactment of a draft law.

But apart from these considerations, which are in the nature of insurance against future contingencies, there is the constructive aspect. Membership in the Naval Reserve offers to veterans and non-veterans with vocational training a peculiarly attractive opportunity to extend, develop, and broaden their knowledge. The finest equipment will be available to them on the annual cruises and in their regular instruction periods. Trained instructors will work with them. Under the vocational plan the way is open to a most friendly and cooperative relationship between Naval Reserve Units and Vocational Schools. Vocational educators will be welcomed at Naval Reserve Armories and Naval Air Reserve Training Units, and many find themselves able to participate in various ways along lines of their interest. Students who take the two weeks cruises will return with renewed interest in their vocations. The advanced Navy equipment with which they will be working should stimulate more thorough understanding of the civilian application of their skills.

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Michigan State College Has Plan for Teachers of Vocational Agriculture

In-Service Education

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Inspecting a field of potatoes following D.D.T. treatment

IN-SERVICE professional training of teachers of vocational agriculture is a major responsibility of the state teacher-training staff in agricultural education. Beginning teachers have only partially developed the abilities needed in teaching. This development of competencies must be conserved and enlarged upon. New developments in agriculture impel teachers to seek sources of information and assistance. Teacher trainers also find that by working directly with teachers in service they are better able to evaluate the pre-service program. Problems called to their attention by teachers can be considered in revising the teacher-training courses and experiences.

Members of the staff in agricultural education at Michigan State College have engaged in in-service education since 1913 when the first itinerant teacher-trainer in agriculture was employed. Four members of the staff now divide their time among resident teaching, research and writing, and in-service teacher training. The in-service training activities include visiting teachers in the school, conducting teacher-training meetings on subject matter and instructional problems, offering graduate courses on campus and by extension, and cooperating with the supervisory staff in many types of workshop and conferences for teachers of agriculture.

The conduct of these activities designed to help employed teachers is governed to considerable extent by a number of guiding principles of in-service education. These are in harmony with those commonly accepted as governing in-service education by superintendents and supervisors. They imply a more direct responsibility by the teacher-training staff, however, than is typically accepted in most teacher-training institutions, or in many states by agricultural teacher-training staffs.

The first of these guiding principles is that teacher-training service should be based upon teacher request. A necessary corollary is that teacher-trainers and supervisors should assist teachers in analyzing their needs.

The third principle is that subject matter help should be specific. It should be carefully selected and given on phases that should be included in the all-day, young-farmer, or adult-farmer classes. Before laying any plans for presenting subject matter, the question should be raised: "Where, in your instruction program, do you propose to use this subject matter?"

Fourth, subject matter should be given to teachers in such a manner as to develop essential understandings and abilities. It should be carried to the doing level.

When subject matter is presented to teachers it is desirable that the better methods of presentation be used. In applying this fifth principle, a heavy responsibility is placed on the teacher-training to orient the subject specialist to teachers' needs and to help him find desirable methods of presentation.

It is rarely possible to simulate agricultural classroom conditions. So, if the subject matter is to be truly "professionalized," the presentation should be accompanied by suggestions as to its use in instruction.

Learning is an active process. It follows that in-service assistance should involve, as much as possible, preparation by and active participation by teachers. A prepared lecture will not do. Questioning, discussion, and doing by teachers should be involved.

Most teachers have tried out some of the visual aids on the market or from commercial concerns. They have found many of them inadequate and some utterly unsuited or out of date. This also can be said of some of the bulletins and other reference material available. Effective training should include preparation of instructional aids, tested by teachers and educationally sound.

Many agencies and institutions either have actual or potential resources which may be of value to teachers of agriculture, particularly technical information and experience. In-service training should involve full cooperation among educational and agricultural agencies and services.

In teacher visitation by staff members, it is essential that such visits be kept free from consideration of administrative or inspectoral problems. The primary purpose is to help the teacher to improve his teaching.

If the maximum benefits to the pre-service program are secured, it is essential that the persons who teach in the pre-service program also engage in teacher visitation and other in-service activities, and that this work not be delegated solely to persons who are full-time itinerant teacher trainers.

In the Michigan program of in-service visitation of teachers of vocational agriculture, the first- and second-year teachers receive first consideration in planning itineraries. These are followed by teachers who are having their first experience with new phases of the work, such as adult- or young-farmer classes,

farm shop, and similar phases. Teachers who have been enrolled in graduate courses are often added to the list, and occasionally an older, experienced teacher, at the suggestion of the state supervisors. Itineraries are made up in cooperation with supervisors so as not to conflict with their schedules.

Demonstrating how to get 56-day litter weights, useful in selecting gilts

No attempt is made to visit all teachers in the state. That is done by the supervisory staff. No administrative problems, questions on reimbursement, or compliance with the state plan enter in. That, too, is the responsibility of the supervisory staff. Emphasis of visits is placed on help which the teacher needs in order to increase the effectiveness of his instructional and other activities and on evidences of effectiveness of the pre-service program. In order to promote readiness on the part of teachers who may not have specifically requested a visit, and to insure understanding on the part of superintendents, letters announcing the visit are sent to both superintendent and teacher explaining the purpose of the visit. It is gratifying to see teachers put forth an effort to enable the visitor to see a typical cross-section of their work, and to find them armed with a long list of real instructional problems on which they hope to get some help.

A narrative record is made of the visit and suggestions given. These records are available to the next visitor and to supervising teachers, and copies are sent to the state office and the teacher and superintendent. The value of this service to the resident program comes when the observations for a term are pooled and suggestions are developed for improvement of the program.

As indicated earlier in this article, staff members cooperate with the state supervisory staff in conducting district conferences for teachers of vocational agriculture during the year and at an annual summer conference. The last three years have seen the development of special workshops for teachers. The most extensive of these have been those for teachers carrying on adult classes in connection with school-community canneries and those dealing with soil and water conservation and management. Also, for the past two years workshops have been held for teachers of farm mechanics. These workshops combine field study, skill training, new subject matter, and development of instructional procedures in such a manner as to win a ready response from teachers of agriculture in Michigan. In 1945-46, three workshops in farm mechanics enrolled 42 teachers. Three workshops in soils enrolled 43 teachers, and since the first one was held two years ago nearly half of the teachers of vocational agriculture in the state have participated in subsequent workshops.

The most recent project in in-service education is the conducting of one-day meetings on request of teachers, dealing largely with subject matter and agricultural skills. This project involves close cooperation with the Michigan State College Extension Service. The plan as operated involves six very simple steps:

1. Request for assistance from a group of five or more instructors.
2. Analysis of needs by the group, with assistance of a teacher-trainer or supervisor.
3. Specific, detailed request to the teacher-training department.
4. Assignment of a teacher-trainer by the chairman of agricultural education and of a subject specialist by the assistant director of extension.
5. Cooperative planning, preparation of materials, and scheduling of one or more meetings by the two men thus assigned.
6. Meetings of teachers, conducted by the teacher-trainer and subject specialist working as a team.

As an example of how the plan works, one meeting was held with teachers of Montcalm County. Questions were raised, and these together with tentative suggestions on seasonal character of the needs, eventually were forwarded to the writer who (as chairman of agricultural education) made staff appointments and asked the extension service for help. Specialists were assigned and met with teacher-trainers. A meeting was planned for November on swine, one for January and February on dairy, and one in March on potatoes. The potato meeting later grew to two, with the second one scheduled as a field trip in August.

During the year 1945-46, eight groups of teachers from 75 departments were given in-service assistance on subject matter. A total of 28 meetings were held. These meetings typically were augmented by the county agricultural agent, a farmer, and occasionally a principal or person from a related agency. Three groups were single-county groups. Two involved two counties each, one three counties, one in northwest Michigan, seven counties (13 departments), and one the entire upper peninsula. One group had only one meeting. Another group of teachers asked for and got six meetings.

During the current year nearly 50 of these meetings have been requested. The task of planning has this year taken most of the time of one staff member. These meetings have not only helped teachers of vocational agriculture; they have enabled teacher-trainers to more nearly keep up to date on subject matter.

Every summer the teacher training and supervisory staff cooperate in the called conference for all teachers of agriculture. This conference has increasingly become a series of small-group meetings based upon teacher interests and needs. Many of these are chaired by teachers, with teacher trainers or supervisors acting as resource persons. A committee of teachers appointed by the president of the Michigan Association of Teachers of Vocational Agriculture always aids in the planning of these conferences. The teachers always evaluate each conference, and these

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Macon Supervisor conducting an adult distributive group meeting

GEORGIA Has D. E. On Its Mind

JEAN C. WESTBROOK
Local Supervisor, Distributive Education
Macon, Georgia

Macon Now Has a Large Adult Program; State Merchants Learn Facts About the Service at Atlanta Merchandise Mart

EDITOR'S NOTE: When the 1947 Merchandise Mart opened in Atlanta, Georgia, on February 3, there was a Distributive Education booth in the lobby of the Municipal Auditorium. The Merchandise Mart was making it easy for stores to *buy right*. The Distributive Education booth was making it easy for the merchants to learn how to obtain free training for their sales forces—a major step toward *selling right*. The booth was set up and maintained by the Distributive Education Department of Georgia, headed by J. R. Wommack, state supervisor. Merchants who had come to buy, were able to find out exactly what kind of training they could secure, and how to go about getting it in their home communities. In addition, *Fashion Features*, published by the Southeastern Travelers Exhibitors, Inc., for The Southeastern Retailer, featured Georgia's Distributive education program in a two-page spread in the issue which preceded the Merchandise Mart in Atlanta. Richard H. Smith, itinerant instructor for the Small Town Program, explained all of the services available to Georgia merchants, and the extent of the program, is a well-written, well-illustrated article.

Typical, perhaps, of the state program, is the Macon Distributive Education Department and the service it extends to its community. The *AMERICAN VOCATIONAL JOURNAL* here presents the Macon story—one of the communities featured in *Fashion Feature's* enlightening article on this educational service. G.H.F.

DISTRIBUTIVE education in Macon, Georgia, is filling the need of the small stores for a personnel department in the opinion of Dr. Mark Smith, superintendent of Bibb County Schools. Many different types of businesses are requesting training as a result of the practical training methods used in Macon during the past few years. Distributive education is a vital force now in the economic development of Macon and Bibb County, although the youngest of the vocational family.

The high school cooperative program paved the way and gave a firm foundation to the adult program. In 1943 a cooperative program was started at A. L. Miller High School on a test basis to see if there was a need on the part of students for retail training and if merchants would cooperate in placing student workers. Eight students were selected, trained in the retail class at school and placements were made in five of the leading retail stores, thus giving merchants an opportunity to see how retail training might benefit worker and employer. The experiment was deemed a success and a department of distributive education was established in Miller High School.

While this experiment was being carried on, the adult program was being started. Several pre-employment classes were held for seasonal selling as well as classes on store time for experienced workers. The following year the writer took over the high school classes continuing with the five students remaining of the test group (two had moved away and one had left school) and a much larger group of juniors.

The adult program was developed during 1944 to the extent that an additional instructor was secured for the high school program and the writer began devoting her entire time to adult extension training. Stores were requesting training to the extent that it became a problem of scheduling time rather than promotion.

The basic needs of a properly functioning program are an up-to-date technical library, the latest audio-visual equipment, a well-balanced film library, a specialist in non-projection visual aids, and a staff of personnel from the trades who are experienced as teachers. Macon and Bibb County's far-sighted school administrators have provided these essentials. An instructor has been trained as visual aids specialist.

Executive and junior executive training now comprises more than half the adult distributive education training given in Macon. Assistant managers and department heads are being trained in all functions of management in various types of stores.

As an example, the Birdsey Feed and Flour Mills, operating more than 100 retail stores in five southern states, requested training for managers and assistant managers of their stores. A test group of 12 came to Macon from five states and were taken through the plant to observe the product being manufactured. Technical merchandise information was given by the plant superintendent.

In conference with store managers, a 36-hour course of instruction was built which included units of related instruction such as modern selling methods, selling through display, care and arrangement of stock, controlling store shrinkage, efficient methods of inventory and record-keeping, supervising store personnel, building success habits.

The company received immediate favorable results from the first group of store managers. Four groups, a total of 60 managers and assistant store managers, have been trained in Macon and others are scheduled for training. The present plan is to retrain all present personnel as quickly as possible, and then establish a semi-annual training period for all new men who are given managerial positions in this company. They are enthusiastic in praise of the program.

Layton S. Hawkins

J. C. WRIGHT
Former U. S. Commissioner of Vocational Education

National T & I Chief Retires

Layton S. Hawkins leaves U. S. Office of Education May 31, 1947

ONE by one and sometimes two by two, those who are fortunate and survive the years come to the point of retiring from active duty. At least that is what they call the procedure by which public employees who reach a certain age step down and out —presumably because they are less able to do a day's work than in their younger years.

That is what happened to Rufus W. Stimson and Robert O. Small of Massachusetts; to Dr. Charles Prosser in September, 1945, to the author and Frank Cushman in 1946, and now to Layton S. Hawkins on May 31, 1947.

Most who survive to reach the retirement age look forward with pleasure to the freedom we will have; to the opportunity of "being your own boss" (except at home); to the satisfaction that comes with doing those things you always have wanted to do, and doing them first if you want to.

Yes, Stimson, Small, Linke, Prosser, Cushman, and Wright have all retired, but have they quit work? No! Certainly not, for if they did their 50 years in the educational harness would cause them to be terribly lonesome and to wish they were back on the job. Stimson in his 80th year is writing a book. Small is writing a report of the war training program in his state. Prosser is writing books, revising books, making speeches, and attending conferences called by the U. S. Office of Education on what to do with the Prosser Resolution regarding the "60 per cent." Cushman is in Long Beach, California, associated with his son in conducting conferences on labor relations, job analyses, and management. John Linke is living the life of a country gentleman. and "J.C." since June 30, 1946, has conducted courses in the Pennsylvania State College summer school, attended four conferences called by the U. S. Commissioner of Education on the Prosser Resolution, written 20 chapters of a new book, and spent seven weeks in Puerto Rico as chairman of a committee making a survey of 15 years of progress in vocational education as an employee of the Insular Board for Vocational Education.

And now comes "Bill" Hawkins. What will he do? He will have plenty to do for he too is obligated to write books, to make speeches, to teach in summer schools. And best of all, he has a job at which he can work long or short hours, or go fishing when he does not choose to work at all. He will retire as Chief of the Trade and Industrial Education Service of the United States Office of Education on May 31, but he will not be idle, and that is the blessing of retirement.

The author has known Layton S. Hawkins for 31 years. They first met in November, 1916, at East Aurora, New York, where they were attending the last of the "Staten Island" conferences which did pioneering work in vocational education. At that time the Smith-Hughes Act had not yet been passed by Congress. The author was director of vocational education in Kansas City, Mo., and Mr. Hawkins had just been promoted from supervisor of agricultural education in the New York State Education Department to the position of state director, succeeding Arthur Dean.

Ten months later we both became members of the original professional staff of the Federal Board for Vocational Education, he as assistant director for agriculture and the author as regional agent in the trade and industrial education service, both serving under the able leadership of Dr. Prosser as director of the Board. Less than one year later Mr. Hawkins became chief of the vocational division, a position where he was called upon to initiate policies, decisions, procedures, and plans for the development of the entire Smith-Hughes program. The author had the pleasure and satisfaction of working closely with him; of serving an apprenticeship under L. H. Carris, chief, trade and industrial education, and under Hawkins and Prosser—all master craftsmen in vocational education. This experience formed the basis of whatever success the author may have had in a later period when he served 24½ years as administrator of the program.

In September, 1921, Mr. Hawkins resigned to enter the industrial field. First, with the United Typothetae of America, then as managing director of the Lithographic Technical Foundation. He then became an in-

(Continued on page 30)

A distinguished career in vocational education reaches a milestone when Layton S. Hawkins retires as chief of the Trade and Industrial Education Service of the U. S. Office of Education. He has accepted the post of director of educational research for the American Technical Society, Chicago, Ill.

In announcing the acceptance, Executive Vice President James McKinney said:

"We are especially happy to welcome Bill Hawkins. Knowing of his pending retirement, we have been anxious to keep his valuable service available to all the people who need it. As a member of our organization, he will be available to the whole field of vocational education. We want him to continue his nationwide contacts and relationships and to pursue those projects he deems to be important. With the rapid progress being made in the industrial and training fields, all of us can make good use of his expert counsel."—"Tech Training" Spring Edition, May 1, 1947.

FAIRMONT *Believes in* Distributive Education

Tours Interest H.S. Students

NETTIE LEE KITCHEN
Teacher-Coordinator,
Fairmont Senior H.S., Fairmont, West Virginia

THE modern trend in education is toward the use of more visual aids. The usually accepted visual aids are films, actual props, and posters but there is another type of visual aid which is being neglected. This is tours and visits to see the type of merchandise being sold, the way it is manufactured, the way a plant operates, etc.

More than a normal percentage of restless students find their way into distributive education classes. Some have fallen behind in their school work, some are older than the average senior, some need money to help out at home, others haven't fit into the regular curriculum. The interest of these students must be caught and held by something different than usual classroom techniques. In the distributive education class at Fairmont West High, Fairmont, West Virginia, lessons are an activity rather than a study.

Several business people have visited the class this year, talking about futures in the retailing field, their own progress, and giving vivid accounts and demonstrations of different vocations.

Following a talk on "The Part Color Plays in Display," the class was invited by the speaker to the display department of his store. They saw how a display was built and how paint could be mixed to get any desired shade or tint. They poked through the multitude of display stock and were fascinated by the simple things that could be used. Here was a lesson demonstrating the place imagination, ingenuity, and showmanship play in the retail field. It was a "living lesson." Students do not think of such trips as such, but as "getting out of class" and they are far more receptive to what they see than they would be to a classroom lecture.

THE non-selling departments and the large part they play in retailing was covered by a trip to Pittsburgh and a tour of those departments in the Joseph Horne Co. plant. Having worked only in small stores, the students had not had a chance to grasp the full meaning and importance of accurate and complete records. After seeing the tremendous amount of work and expense involved in the tracing of a single error, they realized how necessary it is to be accurate in making out sales slips.

Several of the trainees had never been out of Fairmont and only two ever had stayed in a hotel. This necessitated instructions on how to register, how to obtain services, how much to tip, how to order in a restaurant, etc.

The big city stores came in for criticism, because clerks did not show the courtesy to customers that the coordinator had stressed as important in good

(Continued on page 32)

Veterans Enroll At State College

LOUISE S. HITCHCOCK
Chairman, Dept. of Retailing and Distributive Education
Fairmont State College, Fairmont, West Virginia

AT Fairmont State College (once a teachers' college, now a full-fledged fine arts college) veterans show a marked interest in courses pointed toward vocations. New departments in retailing and distributive education, business administration, office administration, and industrial arts, added last September, are justified by high enrollments.

Of the total student body of 898, more than 18 per cent enrolled for majors in these fields. In retailing, 168 persons enrolled, 102 of them veterans.

A discussion of the history of trading brought snap shots, movie film and narratives from boys who had observed open market places and bartering of goods on Iwo Jima, in the Philippines, and in Japan, and stories of inflated prices where demand exceeded supply.

Recent books and new magazine subscriptions being super-scarce, original research became the order of the day. Students could be seen about town with cameras and check lists. Store fronts were photographed, customer traffic counted, parked automobiles tabulated to determine the trading area from which local establishments draw business. Scores of people were questioned about what they thought the city needed most, what they like to buy, why they preferred some stores to others. Storekeepers were interviewed about displays and advertisements, policies toward the public and employees, possibilities for employment and advancement.

Three trips to local stores were made, and one to a large city store. Students observed non-selling operations such as receiving, marking, telephone order board, billing, adjustment, employment and training departments. Store executives volunteered that interested candidates with training would be promoted rapidly to responsible positions, because of a present shortage of good human material.

A local furniture buyer visited one class, spoke on buying procedures and problems, and answered questions. A research specialist stressed the need for marketing one's talents and efforts. The promotion manager of a civic-minded power company demonstrated with convincing facts and figures the need for trained business people to a group of 76 freshmen.

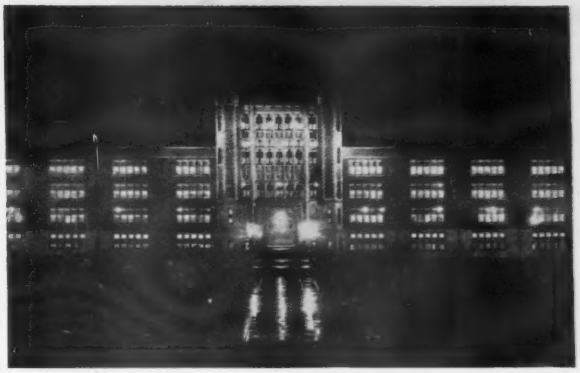
SALESMAN students applied their art to meet the course requirement of earning $100.00 in a customer-contact job during the semester. Three sold insurance and did very well. One student with a kit of brushes made a creditable sum every time he found a few spare hours to make calls. Two boys engineered a Christmas tree project and cleared the requirement easily. Others sold musical instruments, real estate,

(Continued on page 37)

1st of 13

Roosevelt High School in St. Louis, Mo. Has a Sears Foundation Workshop Working

ARNOLD ZOPF
Supervisor, Distributive Education
St. Louis, Missouri



Roosevelt High School, St. Louis, Missouri, as seen in evening

SMART, juvenile and young-set merchandise all over the place—in display cases as trim and modern as anything Chicago or New York stores use. And 100 juniors and seniors bubbling over with enthusiasm.

This is the new retailing workshop at Roosevelt High School in St. Louis, Missouri, the gift of the Sears Foundation and first of 13 retailing units to be provided by the Foundation to 13 schools in as many different states.

Robert J. Milne, manager of the St. Louis Sears store, is responsible for keeping the stock up-to-date. The experiment is being watched with enthusiasm by the city school system.

Says J. S. Nants, assistant superintendent: "We are looking forward and expecting this experience with retailing to put its roots deep in the educational soil of the public high schools of St. Louis and to grow not only among the pupils of that school but to spread to all of the public high schools of the city."

William Semsrott, manager of the Associated Retailers: "This retailing unit will help the students get a better over-all picture of retailing. The fundamentals of selling taught in this program, together with personnel development, display, advertising, and textile information, will be of great value when the student finally goes into retailing, the third largest industry in the country."

C. Dwight Horn, teacher of retailing and coordinator of the part-time cooperative program: "This practical unit should prove invaluable in the training of juniors and seniors interested in retailing as a profession."

The retailing workshop in the school does not take the place of store experience. Students are in the classroom part of the time, and work part-time in a retail store. Full school credit is given for store work and if students decide to go to college, these credits will be accepted. They graduate with their class as they would if taking any other course. At the same time they are paid for every hour spent at work in a store. They learn whether they like retailing and are suited for the work, and they have the practical selling experience a distributive cooperative program affords.

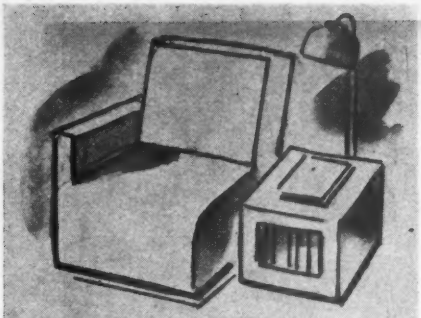
In publicizing the program, the importance of retailing is emphasized. One of every seven persons gainfully employed in the U. S. is engaged in some phase of retailing. The variety of jobs which are not "behind the counter selling," is brought out, the type of surroundings, and the opportunities for success.

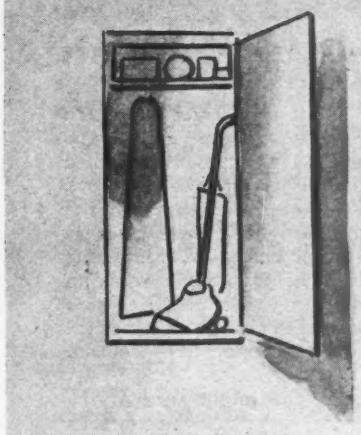
Someone has said, "Retailing is one of the oldest occupations and one of the newest professions," meaning that there is now greater need for training in order to enter the retail field than ever before. It is significant that as the requirements for any job increase, the opportunities for those who meet the requirements also increase.

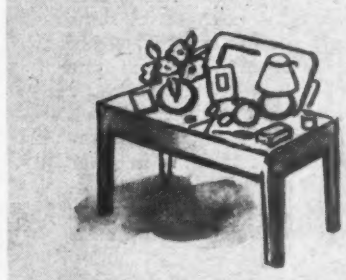
Census figures show that two out of every five high school graduates become retail employees sooner or later. In Roosevelt High School, students can get an early start, earn while they learn, and have a record of experience both in a store and in an outstanding school retailing workshop to back them up when they leave school and start looking for the best possible job.

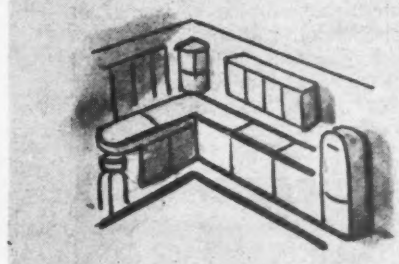
Actual merchandise stimulates interest in work in school

A distributive class in session in new retailing workshop









Home

PART I

A Safe College Home Economics Laboratory

HOME accidents which cause disfigurement, disability, and death have not been reduced even though home hazards have been discussed frequently in talks, articles, and radio programs. Because of these accidents, home life is made less happy and business life less productive.

This loss through home accidents will be reduced only when there is effective leadership for safety education in all communities. Colleges have some responsibility for providing this leadership.

Home economics faculties can make strong contributions for training in leadership for safe home living because home safety affects most aspects of home living. Many home accidents result from lack of skill, poor management, or poor housing. Unless college home economics students recognize safety as a factor to consider in the solution of most home problems, important leadership in home safety will be lost.

This contribution can be made without increasing the load of either faculty or students to any extent if classroom situations are made as educational as possible. Before rejecting this statement, consider the suggestions in this article on safe equipment and furnishings, and the suggestions to be given in an article which will follow next month on integrating the teaching of safe practices.

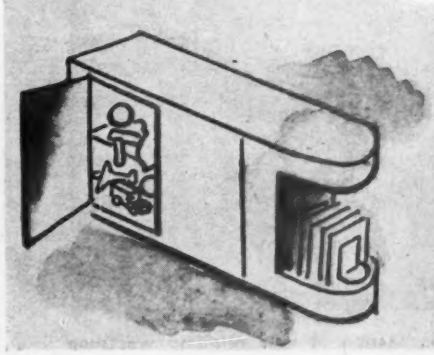
The first step in teaching safety is to provide as safe an environment in which to work as possible. The effect of using safe or unsafe equipment in the college home economics laboratories is more far-reaching than first thoughts may indicate. The far-reaching effect of safe or unsafe laboratory conditions is most revealing when illustrated graphically. (See chart, page 23.)

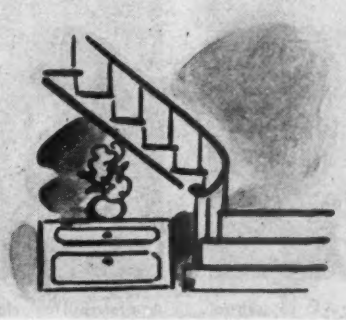
When students imitate equipment and furnishings used in college laboratories, the institution is either gratified or alarmed, depending upon the standards met by the articles imitated. Using a specific example, if the gas stoves in the unit kitchens do not have self-latching gas cocks which lock automatically when closed, students will be influenced to select stoves without such safety features in their own homes and in their high school home economics laboratories.

If unsatisfactory equipment in the college laboratory cannot be changed immediately, plans for very effective safety teaching will need to be made to counteract the effect of imitating undesirable conditions. Unless students are taught to evaluate improvements in equipment from the standpoint of safety, they have no basis for selection other than imitation. As a part of this evaluation, students should be conscious that even though safe equipment costs more money it may be worth the price.

Plans for providing safe surroundings in which students may work should be made before the class meets. These plans will include the kinds of things the teacher will do and may also provide for some student checking of laboratory safety. When checking the safety of the home economics laboratory a new publication by the National Safety Council, called a *Hazard Detector* has been found useful. A list of 37 conditions which provide safe surroundings in home economics

Drawings Courtesy National Safety Council, Chicago, Ill.





Safety

MATTIE PATTISON
Associate Professor, Home Economics Education
Iowa State College
and
GLADYS T. OLSON
Itinerant Teacher Trainer
Iowa State College

Safe Equipment, Furnishings, and Environment Important in Training Home Economics Teachers

laboratories is included in one section of the *Hazard Detector*. Problems related to lighting and ventilation which are a part of health education are also included.

Such devices as the *Hazard Detector* may be used as a part of class work. This activity will draw attention to the provisions which have been made for safety, to hazards which may have been eliminated, and to precautions necessary in order to live with hazards which have been impossible to remove.

Home economics teachers are having more responsibility for choosing new equipment and furnishings than since before the war. In addition to their responsibility for choosing new equipment for their laboratories, teachers are needing to answer equipment questions for people in the communities in which they work. Inquiries are made about almost every type of equipment and furnishing in the home. When prospective teachers are taught about equipment, the importance of minimizing all hazards should be emphasized.

Another kind of teaching that is necessary even in a safe environment is the correct operation of equipment. A clear, simple set of directions, always in evidence near the piece of equipment, is sufficient precaution against unsafe use when college students read directions and are able to follow them. In some home economics laboratories, a printed card of directions encased in cellophane, has been posted near the piece of equipment.

Motivation for maintaining an orderly laboratory may be more effective if the possibility of accidents through hazards in disorderly laboratories is called to the attention of students. Order in the home economics laboratory usually is taught from the standpoint of appearance of the laboratory and safety often is not mentioned at all. The Cook County Study made by the National Safety Council states that disorder caused 18 percent of the home accidents recorded in the study. Order in the home economics laboratory is not just a matter of aesthetics. A consideration of equal importance is the safety of every individual working there.

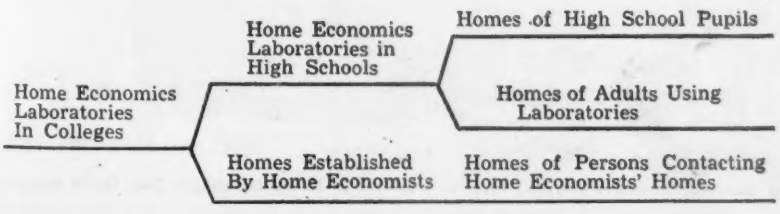
Another contributing factor in many minor and major home accidents is equipment which is not in good repair. Improper equipment and improper use of equipment, which would include using equipment in poor repair, caused 20 per cent of the home accidents in the Cook County Study.

With the present overcrowded laboratory conditions the teacher is under pressure to use equipment not in good repair. This pressure comes from students who are eager to participate in class activities, and from inadequate services for the repair of equipment. Under these conditions the temptation to use a piece of equipment before it is repaired is difficult to resist.

When equipment in poor repair is used in the development of a skill, the result is apt to be slow learning of the skill and a questionable attitude toward safety. When equipment is out of repair a more valuable activity than the one planned for the day might be checking conditions of all equipment to avoid difficulty and trouble in the future, or even learning to repair equipment.

Early in the content of this article it was stated that safety does not increase the load of teacher or student appreciably. However, in this article and the one to follow in the June issue, the need for careful planning is implied.

(Continued on page 32)


Home Economics Laboratories In Colleges
Home Economics Laboratories in High Schools
Homes Established By Home Economists
Homes of High School Pupils
Homes of Adults Using Laboratories
Homes of Persons Contacting Home Economists' Homes

MARGUERITE SCRUGGS
Northwest District
Homemaking Supervisor
Oklahoma

State Home Economics Day

OKLAHOMA'S first "State Home Economics Day" was observed this school year. The story includes interesting accounts of many activities carried out in communities having homemaking programs.

Within this account of what many people did on this special day lies a much bigger story—a story that is significant because it depicts the essence of the homemaking program in the state. The type of activities carried out show an understanding of the real meaning of homemaking education with its concern for personal, family, and community living.

The manner in which plans for the day developed adds interest. Teachers felt a need for interpreting the homemaking program to the people in the state. At their annual state conference they selected the interpretation of the homemaking program as one of the goals in their program of work for the year and voted to have a State Home Economics Day as one means of reaching this goal. The date, November 14, was selected so that activities could be planned in cooperation with National Education Week, and was especially appropriate since Thursday of that week was set aside to stress the importance of "strengthening home life."

At the August Conference, teachers developed a number of ideas that might be used in interpreting their program in the local communities. Later these ideas were organized into a release which was sent to all teachers.

Back in the home communities, pupils were enthusiastic about the idea. Adults who had benefitted from the program wanted to help. It could be a learning experience for everyone, and with this idea in mind, plans were developed cooperatively. Suggestions in the release helped teachers and pupils to plan what they thought would be best in their respective communities. In many communities every homemaking student assumed some responsibility. Uppermost in the minds of all was the chief purpose: to help people learn more about the homemaking program.

At least eight radio programs were presented. "Homemaking in the School and Community," and "The Purpose of Vocational Home Economics" were the themes of two. A skit on "Family Life," and illustrations of the work of classes and of Future Homemakers of America were among the highlights of programs.

At Miami displays of wool skirts, suits, dresses, undergarments and hand work constituted the clothing project. The home nursing and first aid display gave suggestions for care of burns, bandaging, entertainment of a bed patient, and meals served on a bed tray. Cleaners of different types, paint materials, a child care display consisting of books, stuffed toys, and pictures of baby care, were included.

Exhibits at Idabel included household linens, leisure activities, health, family relationships, food preservation, and furniture renovation, with "before and after" pictures. The adult phase was represented by a reclining chair and ottoman finished in a clinic held for adults.

Department improvements were displayed in some schools. Hartshorne students demonstrated remodeling and repairing clothing; the boys class participated in a style show at Hobart; students assisted with care of "baby guests" at Verden Open House.

Many schools had exhibits in downtown store windows such as stuffed toys made by the girls, ideas for food conservation, clothing, etc.

Verden homemaking students served dinner to the Grady County Schoolmasters and the president of the local FHA chapter spoke to the school people. A school lunch was served to the Chamber of Commerce in the school lunchroom at Coalgate. A FHA parent-daughter banquet at Fairview gave every homemaking girl something to do. The senior chapter of FHA at El Reno gave an initiation installation service for junior high chapter and junior high homemaking department held Open House afterward.

A special edition of the paper was dedicated to home economics at Clayton and the school section of the Healdton Herald was dedicated to State Home Economics Day. In Stillwater, representatives of high school and college homemaking groups, child nursery, child care corps, farm agencies and home demonstration workers cooperated. A full-page spread of pictures appeared in the local newspaper.

Seventy high school students at Blackwell worked diligently on projects exhibited, with every girl assuming responsibilities. Personal letters were sent to someone in each of the 48 states telling about Oklahoma's State Home Economics Day. Teas were served, 22 girls voluntarily worked in two hospitals, a car with a loud speaker traveled throughout the town announcing the Day, and a radio program, "Highlights in Homemaking" was given over WBBZ, Ponca City, by the Blackwell girls.

Teachers and pupils throughout the state feel that the special efforts did help people to understand the homemaking program. Participation alone was gratifying. Because people seemed to enjoy and appreciate this special opportunity for learning about the homemaking program, it is hoped that State Home Economics Day will be observed annually.

Chickasha parents, business people, faculty, students at Home Economics Day Open House

Andrew Triche

HARRIETT H. CARR
Editorial Assistant, AVJOURNAL
as prepared from the report of

S. B. MALLETT
Chief Instructor, Itinerant Auto Clinics
Louisiana

S. B. Mallett

Schools On the Move

Louisiana's Itinerant Auto Mechanics Clinics Set Example for Other States

AN entire school, which can be packed and moved from one city to another in a few hours, has been developed in Louisiana. It's the Itinerant Auto Mechanics Clinics, and the plan has been so successful that Georgia, Alabama, and Mississippi already have sent representatives to Louisiana to see how they do it. Any state is invited to correspond or send representatives to study the method of operation.

Packing boxes have been built to size for all equipment—charts, slide films, blackboard, cutaway models, catalogs, specification sheets and other visual aids which have been assembled to help with the instruction. Posters to announce the school, application blanks for enrollment, form letters to notify trainees of their class meeting date, enrollment sheets for the instructor and the State Office, the instructor's activity report, lists of clinic equipment, all have been assembled in quantity for operation of these itinerant schools.

The clinics were started in 1938 but were closed during the war and not reopened until 1944. S. B. Mallett, who was engaged as chief instructor for the initial clinic is now supervising the state program, under the state supervisor of trade and industrial education, Andrew Triche.

The clinics offer only supplementary or upgrading work, but beginners can benefit by the training. Clinics remain in a city for three months, giving 12 lessons or 24 hours of instruction. The same lesson is repeated every night for a full week, to take care of the enrollment. Usually there are five groups of 25 men each, or a total of about 125 in the city who are enrolled for the three month course. Thus if a trainee misses his regular night at class (except Friday) he can take the work on any other night that week.

Explanation and demonstration instead of lecture is the approved method of conducting the clinics. Tables are arranged in a hollow square or U shape so the instructor can move freely and follow the men step-by-step as they progress with their work. An outline is given them at the begining of the course and rarely is there any deviation from the plan. It is not uncommon, however, for classes to continue beyond the scheduled time and the men have been known to stay until they were requested to leave around 11 p.m. Those who complete nine of the 12 lessons satisfactorily are entitled to a certificate, which is awarded at a banquet. Usually the speaker is a man from the automative industry, and the event is an occasion of considerable importance, conducted with fitting dignity.

Louisiana's experience has resulted in engaging only men who have graduated from a carburetor factory school as instructors. Even the most highly skilled mechanic has not been capable of an instructor's job without this training. The instructor in a full-time employee who works during the day as a consultant or in an advisory capacity for the local shops from which the trainees come. After a week or two in a city, usually the calls for his services exceed the available hours. The instructors call on the shops to give individual assistance, only on invitation. Since they are "all around mechanics" they are able to help on any part of the automobile.

Louisiana gives carburetor clinics, tune up clinics, and front end and brake equipment clinics. The equipment for the carburetor clinics includes folding chairs, folding tables, blackboard, charts and stands, cutaway sections, special carburetor tools and boards, projector, screen, Carter WI Chevrolet carburetor, Carter Ball & Ball Plymouth, Carter WDO (Dual) Buick, Stromberg Dodge, Chandler Groves, Ford, and Zenith 28 series carburetors.

Thirty of each of these carburetors are on hand at all times; one tool board with tools and specification sheet is in front of each man when the class opens.

Equipment for the tune-up clinic, in addition to tables, chairs, projectors, etc.: Distributor tester—

(Continued on page 34)

Louisiana Brake and Front End Clinic instruction is thorough

Communication Through The Use of Visual Aids

ED CHRISTIANSEN
Head, Machine Shop
Collinwood High School, Cleveland, Ohio

COMMUNICATIONS or the reception and transmission of ideas and their effect upon learning is the basis of all education.

The larger part of all educational experiences are visual, auditory, or manipulative and are acquired through three channels, the eyes, the ears, and the muscles. The ability of an individual to comprehend a new idea is made easier if all three avenues are used, or any combination of the three.

Recognizing the five facets of expression (seeing or reading, writing, speaking, listening, and manipulation), it then is possible to attempt to organize simple patterns of expression by the addition of audio-visual aids to the widespread use of text books.

The adult style of writing which is almost universal for school texts has proved to be a barrier to effective study by most pupils, and if no other aids are available, may cause such a lack of understanding that desirable attitudes toward further education are made impossible.

The use of texts alone often fosters the wrong concept of words, since no printed page can have meaning to an individual unless he has within his experiences the necessary sense perceptions which will serve as a basis for intelligent interpretation. Addition of visual aids such as models, charts, slides, slide films, diagrams, and graphs make use of one or more avenues to better comprehension and retention of subject matter.

The concentrated program of training several million persons in the Armed Forces during the recent war years required special methods in which sound motion films played a major role. Although the results of that film training program were excellent, there still remains the need to train a large percentage of peacetime teachers in the use of this medium of communication.

Securing the best results from the use of sound motion films requires as much or more time in preparation as any other method of instruction.

The first step in good preparation is to preview any film. Previewing is a vital step, because only then can it be evaluated in relation to other media of instruction.

In recent years many educational films have been produced, some material being duplications, and it would be well for each instructor to construct check sheets or to have some other form of keeping information concerning films.

The writer has made use of the check sheet on page 28 when previewing sound motion films, and is thus able to make an objective selection of films for training purposes in several branches of shop work. Variations of this check sheet easily may be constructed by academic teachers.

Some of the items may vary in importance, depending on the objectives of the class lesson, but the most important considerations can be discussed briefly.

Item I needs little explanation other than that it is necessary to make sure that any film should be shown at a definite time, and that the material be organized in steps from the simple to the more complex.

If the film is one of operational skills the previewer should be alert to check the organization of the material. Is the emphasis of action and voice on the really important things? Is the choice of information and operations good? Does the operator set up good behavior patterns by the way he handles tools and machines while observing good safety habits?

How might the length of the film affect the comprehension of the pupil? Are too many situations presented so that a loss in effectiveness is caused?

Does the photography display a floor of action and continuity or are there disconnected scenes which tend to bewilder?

Probably the most valuable contribution a sound film may give toward better transfer of ideas is in the voice or commentary. The quality of the voice and the manner in which the comments are delivered are decided factors in effective reception. A straightforward account, given in a normal tone, expressed in language which is on the educational level of the audience tends to hold interest throughout the entire film.

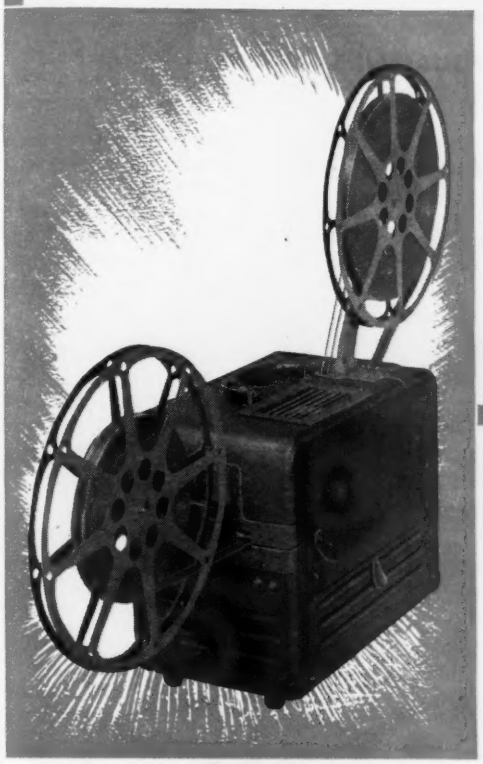
The value of a film is heightened if a manual accompanies it, particularly if the commentary is included in the manual. The teacher can then make sure that a true account of the action is given and new words can easily be selected for further class discussion.

Key situations in the motion picture are selected and made available for lengthy discussion in film strips which are a part of the unit, as for example, the training films made under the supervision of the U. S. Office of Education.

Such an objective preview enables the teacher to perform the next step in preparing the subject matter for a class.

Tests have proved that a week after a film has been shown to a class, without any previous information or follow-up discussion, less than 20 per cent of the film content has been retained, but if an explanation of the film with the important points is first given and a discussion of the film is conducted after the showing,

Let Filmosound carry its share of your heavy teaching load



Schools and colleges have an always-dependable teaching aid in Filmosound, the Bell & Howell 16mm sound film projector that augments your good work.

Presenting your selections from today's vast and ever-growing resources of educational films, Filmosound helps speed instruction and lighten the heavy teaching loads brought about by large classes.

Filmosound assures you finest pictures and sound

Educators who have used motion pictures most successfully know that if audio-visual training is to be fully effective, reproduction of pictures and sound must be of the finest quality, and free from all sense of mechanical intervention.

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Exclusive Filmosound features obviate chances of film damage. And Filmosound is *easy to operate.* Instructors or students quickly learn to use it. They will find Filmosound quiet, cool, and always dependable.

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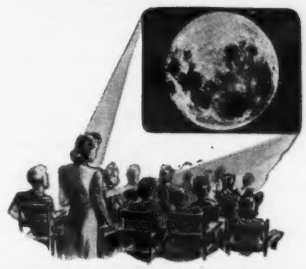

Pupils learn 40% more in less time when motion pictures are used as teaching aids. Research and experimentation have established this fact, pointing the way to relief from the great handicaps under which schools must work today.

Precision-Made by

Bell & Howell

Since 1907 the Largest Manufacturer of Professional Motion Picture Equipment for Hollywood and the World

the percentage of retained material by a class rises to above 40 per cent.

Even more effective is the use of instruction sheets which outline the main points of the film and require the pupil to fill in the details. After correction by the instructor the sheets can be returned to the pupil for filing in a suitable notebook.

Special emphasis can thus be placed on new words and situations which otherwise might be overlooked.

Finally, an examination should be given which helps to increase the amount of retention of material.

Enough copies of both instruction and examination sheets can be mimeographed so that repeater showings of the same film may be made easily without any further preparation by the teacher.

It is of utmost importance that teachers be allowed enough time in the school day to prepare the material for film utilization.

In this modern age of mechanical refinement no individual has the time or opportunity to have all the information or experiences known to the human race, but sound motion films supply a good substitute.

Through the vicarious experiences afforded by the medium of sound motion pictures are communicated desirable concepts, attitudes, and appreciations in much stronger and enduring forms.

CHECK SHEET FOR PREVIEWING VISUAL AIDS

SOUND MOTION FILMS

Title_____

A
Operational _____
B
Informational _____
C
Combination of A & B _____

1. Material organized in learning steps	Yes_____ No_____
2. Emphasis placed correctly	Yes_____ No_____
3. Choice of action good	Yes_____ No_____
4. Tools used correctly	Yes_____ No_____
5. Good behavior pattern set up by operator	Yes_____ No_____
6. Length	Adequate_____ Too Long_____ Too Short_____
7. Length of scenes	Adequate_____ Too Long_____ Too Short_____
8. Scope	Enough_____ Too Much_____ Too Little_____
9. Pace	Even_____ Too Fast_____ Too Slow_____
10. Camera movement	Enough_____ Too Little_____
11. Operator	Enough_____ Too Little_____
12. Continuity of action	Yes_____ No_____
13. Quality of photography	Good _____ Adequate _____ Poor _____
14. Integration with film in a series	Yes_____ No_____
15. Quality of sound representation	True_____ False_____
16. Voice fit the film and audience	Yes_____ No_____
17. Commentary—balance between "how" and "why"	Yes_____ No_____
18. Music	Effective _____ Non Effective _____
19. Humor	Good Taste _____ Poor Taste _____
20. Instructional value	High _____ Low _____ Average _____
Instructional Manual	Yes_____ No_____
Film Strip	Yes_____ No_____
Running Time	_____ Min.

Comments:

NEW IN THE AUDIO-VISUAL FIELD

Modern Talking Picture Service, 9 Rockefeller Plaza, New York 20, N. Y., have published two new bulletins, *An Index and Guide to Free Educational and Classroom 16mm. Sound Films from Industry, 1946-47,* and *Free Motion Pictures from Industry.*

Viewlex, Inc., 35-01 Queens Blvd., Long Island City 1, N. Y., announces a new model AP-3 Viewlex 35mm. and 2x2 slide projector. The Aspheric condenser system developed and introduced by Viewlex, is used in this model.

Radiant Manufacturing Corp., Chicago, Ill., has designed a screen carrying case in both heavy fibre and a canvas fabric which protects the screen from scratches, dust, and dirt as well as making it easy to carry.

Kolograph Corp., 223 W. Maryland St., Indianapolis, Ind., has a new 16mm. sound film projector featuring "Rock-Still" pictures, made possible with an intermittent mechanism. The amplifier and its associated equipment may be used separately from the projector as a public address system, and the projector will accommodate silent as well as sound films.

Encyclopaedia Britannica Films, Inc., 20 N. Wacker Drive, Chicago 6, Ill., has a new booklet, *Classroom Motion Picture Clinic,* designed to help teachers, audio-visual directors, and administrators who wish to improve the selection and utilization of classroom films.

Electro-Voice (Buchanan, Mich.) Model 630 Dynamic Microphone now provides high fidelity pick-up and reproduction of voice and music through the use of the new acoustalloy diaphram. The model is especially rugged for indoor or outdoor use.

Radiant Manufacturing Corp. has a new lower priced tripod model, to be known as Model "Q." It includes a self-locking lowering and raising device on the extension rod, for easy instantaneous adjustment in screen height. The model is portable and easy to carry.

American Council on Education, Washington, D.C., has issued a bulletin, *Audio-Visual Aids in the Armed Services,* which sells for $1.25.

Anken Film Co., Inc., Newton, N. J., has a new roll-film for amateur use, available in all popular sizes including 127, 120, 620, 116, and 616. It is highly green sensitive and is recommended for outdoor snapshots and scenes requiring a long scale of tones with good contrast and low inherent fog. The film requires only normal processing procedures.

FILMS

Appleland, motion picture in color, distributed by Modern Talking Picture Service, 9 Rockefeller Plaza, New York 20, N. Y. Free for transportation cost to schools. The picture shows planting of young trees and follows the apple from blossom time through harvest and preservation of the fruit.

The 26 Old Characters, 16mm sound motion picture, available to schools on a free loan basis through the Jam Handy Organization, 2821 E. Grand Blvd., Detroit, Mich. It explains the origins of writing.

The Story of Oil, slide film with record, available to schools and colleges without cost through the National Sales Division, The Coca-Cola Co., 515 Madison Ave., New York 22, N. Y.

Singing Wires, both 35mm and 16mm sound on film, $50 for 16mm.; $75 for 35mm. Rural and Suburban Market Development, 155 E. 44th St., New York 17, N. Y. Pictures what electricity can mean to the farmer.

Helping People Buy, four 15-minute sound slidefilms for training retail sales people. The Dartnell Corp., Ravenswood and Leland Aves., Chicago 40, Ill.

Petroleum. Shows importance of oil in the world economy and world maps showing distribution of the earth's petroleum resources. *Fire* explains the principles of combustion, nature of fire hazards, and principles of fire extinguishing. Both 16mm. black and white sound motion pictures, one reel, 10 minutes. Sale price, $50 less 10 per cent. Encyclopaedia Britannica Films, Inc., 20 Wacker Drive, Chicago 6, Ill.

How a Baby Grows, *How Behavior Grows, The Growth of Motor Behavior, The Growth of Adaptive Behavior, Infants Are Individuals, Twins Are Individuals, The Baby's Bath, Bottle and Cup Feeding, The Conquest of the Spoon, Self-Discovery in a Mirror,* and *Early Play.* 16mm. black and white silent motion pictures, one reel, 10 minutes. $24 each. Encyclopaedia Britannica Films, Inc., 20 N. Wacker Dr., Chicago 6, Ill.

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• Baltimore Observes 25th Anniversary

This year marks the 25th anniversary of the organization of the division of vocational education in Baltimore as a part of the public school system, and Mayor Theodore R. McKeldin has proclaimed April 27-May 3 as "Vocational Education Week." A "Review of Progress" has been planned which will include an exhibit of educational activities of the division on May 2 and May 3 at Baltimore Polytechnic Institute. At 8 p.m. May 2, a special narrated review with illuminated color pictures will be presented in the auditorium of the Institute.

The educational activities which were charter departments of the division in 1922, held significant records of accomplishment prior to that date. Bookkeeping was introduced in Male School No. 3 in 1831. Industrial arts instruction was offered as shop work and drawing in Baltimore Manual Training School, which was established in 1884. Home economics education has been recognized as an important subject in the public schools since 1887. Trade and industrial education courses were offered in 1918 with the establishment of the Boys Vocational School, which followed the passage of the Federal Smith Hughes Act in 1917.

The work of the division has been expanded during the past quarter of a century to include guidance and placement services, aptitude testing, distributive education, and training for employed workers such as apprenticeship, foremanship, and leadership training. The multi-level program of vocational education, a very effective and well-organized plan, provides education and training for pupils of varying levels of interest, mental capacity, aptitudes, and basic education. Vocational education for out-of-school youth and adults constitutes a large department of the division. The regular vocational evening school classes provide a great variety of offerings. The War Production Training program trained more than 100,000 men and women during the five-year period, 1940-1945, and the present vocational training service for veterans is an important part of Baltimore's educational program.

The activities of the division in the new Junior High and Senior High School buildings have given students an opportunity to acquire new skills, varying degrees of technical training, a knowledge of scientific principles and processes, and an understanding of many practical and cultural aspects of life. Up to the present, there have been no new buildings erected for vocational school purposes but accomplishments have been remarkable.

Almost without exception, graduates of vocational courses have found employment and made good in the work-a-day world. Vocational education for adults has been effective and commendable. With the continued development and improvement of the educational services of the division of vocational education, the future appears bright for youth and adults in Baltimore.—*Charles W. Sylvester, Director of Vocational Education, Baltimore, Maryland Public Schools* and *Treasurer, American Vocational Association, Inc.*

Hawkins

(Continued from page 19)

dustrialist, as vice president of the Rossman Corp., followed by becoming managing director of the Cement Floor Contractors Association.

His return to the educational field was gradual. During 1933-35, he was director of the Education and Adjustment Service in New York, after which he moved a step nearer public educational work as state supervisor of the Emergency Adult Education Program in New York. To close the circuit of 18 years away from the Federal Office of Education, he came back to Washington in 1939, as one of the members of the original committee appointed to help organize the Occupational Information and Guidance Service. When this job was finished, he was recommended by the author for appointment as chief of the Trade and Industrial Education Service.

Even before the appointment had been concluded, there were rumblings of war with the Axis in Europe and with Japan in the Pacific.

The story of "Bill" Hawkins as director of the program of Vocational Training for War Production Workers is familiar to most readers of the *American Vocational Journal.* Ten million men and women were trained in five years. The program, on which $300,000,000 of Federal money was expended by the states under Mr. Hawkins' leadership, was concluded June 30, 1945, and there has been no cause for investigation. On the other hand, the record made by the War Training Program was such as to cause the American Federation of Labor at its annual convention in New Orleans on November 20-30, 1944, to pass a resolution commending the program and stating: "The American Federation of Labor looks with pride on this record and rejoices in the large part it played in establishing the vast system of vocational education in the U.S."

And now "Bill" Hawkins is to retire at the end of May, 1947. No! He is just changing bosses and his place of refuge from the city of Washington to some little village not too far from New York City, where he can play in his well-equipped shop; work in his studio; hoe in his garden; direct a research program for the American Technical Society of Chicago; write books; attend conferences and do very much as he pleases. That's what we mean by retirement. We can only say, "Come on in, Bill, the water's fine." And speaking for Prosser, Wright, and Cushman, tell him "we, too, have known."

• FFA Camp

The National Future Farmers of America Camp will open about June 1 and close the middle of September. Special arrangements can be made for Chapter groups which wish to use the camp either before or after that date.

The Camp is located about nine miles from Alexander, Va. It includes a barracks with 76 bunks, kitchen and combination dining and recreation room. No meals are served, but facilities are available for use of the boys while in Camp.

• Scholarships for Commercial Art

The art and advertising industry in Los Angeles, California, believes in art training courses, and this year offers two $250 scholarships to outstanding and deserving high school art majors who demonstrate a desire to enter this occupation.

In cooperation with the Frank Wiggins Trade School and its art and drafting annex, the "Downtown Shopping News" and the Art Directors Club of Los Angeles are the donors. The first scholarship began with the September term and extends for ten months; it is now approaching completion. The second will be granted next September.

The organizations giving the awards do not hold the winners responsible to them in any way or indebted to work for them after they are qualified for employment. The scholarships are designed to encourage talent into the trade, and to interest young people in the community to train for their trade at a competent training school.

Any Los Angeles high school graduate between the ages of 16 to 19 who is an art major is eligible. Judging is done by representatives from the organizations donating the scholarships, the advisory board and educational leaders in the field; and instructors of art at the Trade School. Basis of judging is on a personal interview for personality, health, and attitudes, and presentation of acceptable art work assigned by the art department.

Both scholarships are in the commercial art field for the first 10 months of training. Students proceed every six weeks into new units of study. The scholarship enables the student to learn the basics and prepare for the specialized field he wishes to enter.

Employment opportunities today are so numerous that a qualified student rarely completes a full two-year course. Once he has begun to specialize, the trade calls him to work.—*Mary Ann Callan, Editor, "Trade Winds," Frank Wiggins Trade School, Los Angeles, California.*

• D. E. in Puerto Rico

Part-time and evening classes in distributive education have been offered in Puerto Rico since the inception of the program in 1939, filling essential needs in different stores throughout the island.

This year both types of classes are offered on a year-program basis. Material for the classes is prepared to fill the needs of each store. For example, La Colombina, in Rio Piedras, asked for courses in fundamentals of selling, display for a retail store, why I should be a cashier, make friends with textiles, the royal road to beauty, and how to sell.

The program is elastic. While it is under way a course or courses may be added or eliminated or substituted or changed to meet the situation in a particular business enterprise.

Material for each course is first written in English then translated into Spanish, the language in which all courses are taught.

A MAN who works in the wheat all day knows what it takes to place bread on the tables of the world. After he has pitched bundles all afternoon, he comes in from the field, tired, hot and sweaty; he shakes the chaff out of his pants and digs beards out of the back of his neck. He sloshes his head in a pail of cold water, dries himself on the roller towel, looks out over his fields; and says to himself—"Well, the blankety-blank wheat's in for the year." — from Farm Quarterly.

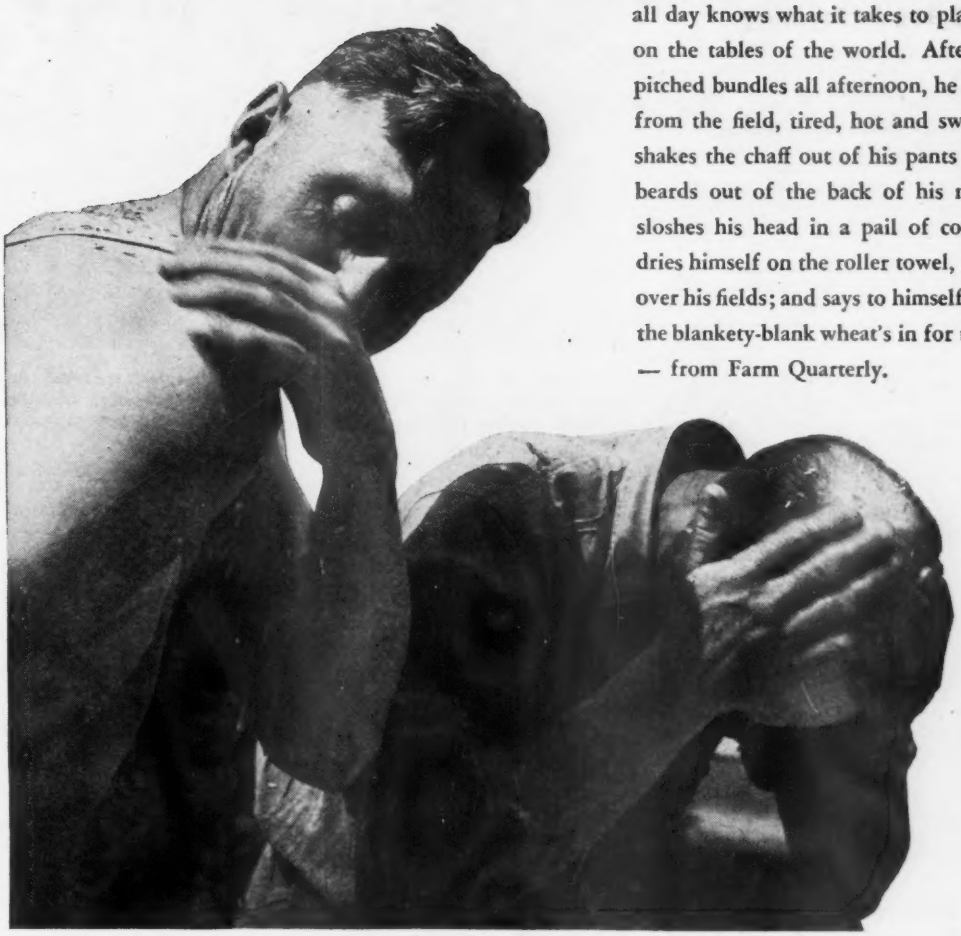
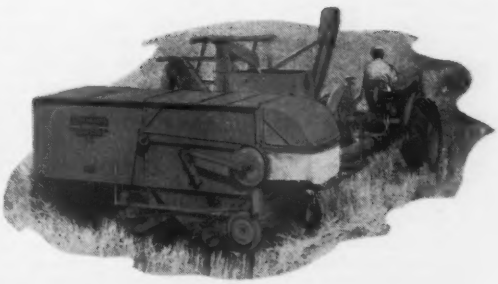


Photo Courtesy Farm Quarterly

UNLESS . . .

Most every farmer knows the above experience all too well. That is . . . unless he has discovered, as thousands have, that one man can harvest grain or seed crops sitting comfortably on the tractor seat, out of the chaff . . . that straw in the field can be handled with ordinary hay tools . . . that lodged, weedy crops can be saved where a binder would be helpless and tangled grain a nightmare.

A man cannot know the rich satisfaction of harvesting his choice of 100 crops at the peak of their quality, without waiting for custom rigs . . . he cannot put plump, stalk-ripened grain in the bin at the lowest cost . . . unless . . .



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When writing advertisers please mention *American Vocational Journal.*

• NFA Has Investment of $293,889 in Farming

Young Negro Farmers of America have $293,889.81 actually invested in farming. This was the report of the secretary of the NFA at the last annual meeting, held in Baton Rouge, La., when a membership of 25,551 was announced.

More than 7,100 members and 463 chapters carried out thrift practices. Thirty-one achievement award and contest winners who received $1,725 in cash prizes, also were announced.

A special Victory Session honored 17,800 members who served the nation during the war and taps were sounded for over 100 service men who lost their lives.

The principal address of the convention, given by Dr. Felton G. Clark, president of Southern University, was a challenge to take advantage of educational opportunities offered in high schools and land grant colleges, to prepare themselves to help their people and society.

Appreciation was expressed to the donors to the Future Farmers of America Foundation, Inc., which sponsors prizes for both FFA and NFA. Thirty-one achievement award and contest winners who received $1,725 in cash prizes, were announced.

Officers for the present year are: president, Lawrence D. Price, Montgomery, Texas; first vice president, Charles G. Flippan, Tennessee; second vice president, Lucious Vickers, Oklahoma; third vice president, Charles L. Woods, Virginia; secretary, Rupert G. Seals, Kentucky; treasurer, Willie R. Dockery, North Carolina; reporter, Charlie Wexler, Jr., Louisiana.

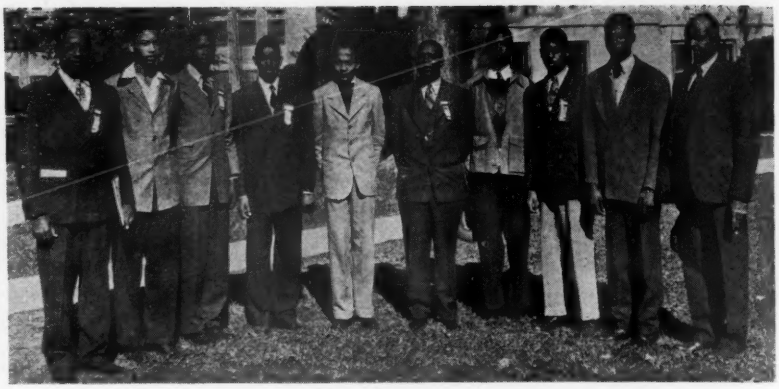
• Earl Stillwell Honored For Meritorious Service

Earl C. Stillwell, one of the pioneer vocational agriculture teachers in New Jersey, was honored by the Monmouth County Board of Agriculture at its recent banquet, before an audience of 175 county residents.

The citation follows:

"Earle C. Stillwell, born in Monmouth County, completing your early education here and graduating at Rutgers University in 1911, where you specialized in agriculture, you have spent your active life to date in vocational agriculture in your home county. While training others for their vocation, your career has been more than a vocation. Rather, it is a dedication of your life and talents to the preparation of young people for the modern world in which they must find a place. To this unselfish principle your students here and far away will give full testimony.

"The Monmouth County Board of Agriculture has endeavored to find some public way of expressing its appreciation of devotion like yours. You are among the very first to be awarded this certificate. We hope you will accept it as an 'Advanced Degree' by your friends and associates, and that it may be considered a mile-post of esteem for your work and your personal qualities of a gentleman and scholar, whom we are glad to know these many years."



Left to right: D. C. Jones, national adviser; Wexler, reporter; Price, president; Flippan, 1st vice; Woods, 3rd vice; J. R. Thomas, executive secretary; Vickers, 2d vice; Seals, student secretary; Dockery, reporter; S. B. Simmons, executive treasurer

Tours

(Continued from page 20)

salesmanship. Chewing gum on the job ceased to be a problem after observing gum chewing by large department store clerks.

Part of the class visited the campus of the University of Pittsburgh, went to the top of the 42-story Cathedral of Learning, and visited the Research Bureau. Others spent a little time in the Carnegie Museum.

On such trips, each student bears his own expenses, and since additional trips are wanted, students are now saving for them.

When the subject of advertising was studied, an advertisement was followed through the local newspaper plant from the rough layout to the finished paper. Now they know what a linotype machine looks like, what a mat is, and the word "copy" has new meaning.

"I didn't know it would be this interesting," is the usual comment after such trips.

In-Service

(Continued from page 17)

evaluations are given serious consideration in planning the next year's conference.

Graduate courses for teachers of vocational agriculture are provided on campus in three-week and six-week courses both in agriculture and agricultural education. On request, courses have also been taught off campus at convenient locations in the state. Teachers working toward a Master's degree in education may, if they choose, follow a plan which does not involve a thesis. If they major in agriculture, they may specialize in one department with a thesis or they may take a wide range of subjects in the School of Agriculture and agricultural education without a thesis.

There are, no doubt, many ways in which the Michigan program of in-service training can be improved. However, the program does offer a very wide range of staff activities, keeps the staff informed on problems in the field, enables the staff to evaluate the pre-service program, and teachers approve of the program. Undoubtedly the teacher-training staff in agriculture in Michigan will continue to give major attention to its in-service program.

• H. E. Workshops

A series of workshops are being planned for the purpose of interpretating state materials relating to the study of "Factors Affecting the Supply of Home Economics Teachers."

The workshop at Cornell University will be held July 14-26.

The dates of the workshop at Iowa State College are July 28-August 9.

The workshop at Colorado A & M College will be held from August 11 to 23.

University of Tennessee which has the last in the series, holds its workshop August 28 to September 6.

The time has been staggered to make it possible for those in any region whose schedule conflicts with their regional workshop, to attend one of the others scheduled.

Safety

(Continued from page 23)

Many home economics teachers do not feel that they have the ability to teach home safety, but they do have the background to educate themselves, if they use the necessary time and available resources.

The training of most home economics teachers would be modified if teacher trainers agreed with the educators who wrote a recent publication on safety education.* These educators said, "A physical education teacher who is not trained in safety education related to his field is inadequately prepared, as is a home economics teacher, or an industrial arts teacher, or any other teacher untrained to meet the hazards involved in his subject field."

In this article the training of home economics teachers as it relates to the provision, maintenance, and use of home equipment and furnishings has been discussed. Methods of teaching from the standpoint of safety will be considered in the next article.

**Safety Education for Teachers,* American Association of Teachers Colleges and National Commission on Safety Education, 1201 16th St., N.W., Washington 6, D.C. 1946.

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American Vocational Journal 220 EAST 42nd STREET NEW YORK 17, NEW YORK

With the Associations

• Florida Vocational Association met in Tampa April 17, 18, and 19. Charles W. Sylvester, AVA treasurer, was the banquet speaker.

James R. Coxen, chief of research, U. S. Office of Education, was loaned to the State Department of Education to work with the Florida Vocational Assn. and the Vocational Committee of the Florida Citizens Committee on Education to outline the vocational legislative program to be presened to the 1947 session of the state legislature. The Citizens Committee on Education is attempting to place vocational education under the Teacher-Unit plan now existing in the public schools of the state.

• Officers of the Ohio Vocational Association are John E. Fintz, Cleveland, president; J. Ralph Bender, Xenia, vice president; C. E. Rhoad, Columbus, secretary-treasurer.

• Alabama Vocational Association held its meeting March 28, with sectional meetings following the general session. The association is cooperating in efforts to promote legislation for the expansion of vocational education in Alabama, and has conducted an AVA membership drive. Speakers at the convention were Terry C. Foster, assistant regional representative, Office of Vocational Rehabilitation, Atlanta, and Dr. Charles Prosser, Wisconsin.

• Nebraska Vocational Agriculture Association has the following activities under way: Acquisition of a state FFA camp; market day for vocational agriculture students at Omaha (held March 26); improved courses for the four-week summer session in June; a committee on administration of vocational agriculture; a study of credits given for vocational agriculture, use of instructor's time, other duties of instructors, and length of class periods; revision of the state curriculum for vocational agriculture in Nebraska high schools; a report on visual aids (films and equipment) to be made at the June conference.

• Massachusetts Vocational Associatiotion will hold its annual convention at New Bedford May 10. Lt. Gov. Arthur W. Coolidge will be the main speaker.

• William Voigts, Phoenix, is president of the Arizona Vocational Assn. and Margaret Booher, Tucson, is secretary-treasurer.

• The annual spring meeting of the Kentucky Vocational Association was held April 17. U. S. Senator John Sherman Cooper was the guest speaker. The KVA Planning Committee conducted a survey of the state to determine needs for vocational education, which can be used as justification for the George-Barden Act money.

• California Industrial Education Association groups in Los Angeles have, for the past three years, had an active demonstration team of shop instructors in fields such as plastics, woodwork, silk screen processing, and metal work. This team has accepted invitations to visit groups in outlying areas and has been very helpful in promoting good instructional practices as well as providing an interesting meeting for local instructors. Last year the team participated in the annual C.I.E.A. convention in Fresno, and both this year and last a similar group in the Sacramento area formed a demonstration team.

• Georgia Vocational Association held its annual convention April 25 at Savannah, during the GEA convention. All services representing vocational education were represented and a plan formulated for rotating the officers of the state association among the groups. A new constitution and by-laws were on the agenda.

• New Jersey Vocational and Arts Assn. held its convention at Asbury Park March 20, 21, and 22. M. Norcross Stratton, director of vocational education in Massachusetts, was keynote speaker, talking on "The Problem of the Sixty Per Cent Group in the High Schools of America." Nu Chapter of Epsilon Pi Tau brought Frank C. Moore to the convention to speak on "Improving Instruction in Industrial Arts." Middlesex County Vocational Schools sponsored an all-convention luncheon and these teachers added $250 in guest prizes. New officers are: President, Marie Pentz, home economics, Bernardsville; first vice president, Holmes A. Cliver, industrial arts, Summit; second vice president, Albert E. Jochen, director, Middlesex County Vocational Schools; third vice president, James F. Aschuff, fine arts, Millburn; treasurer, John S. Ray, principal, Camden County Vocational School; secretary, J. J. Berilla, industrial arts, Phillipsberg.

• The New Jersey Section of the AVA met with the Vocational and Arts convention. Officers elected were: President, Albert E. Jochen, director of vocational education, Middlesex County; vice president for agriculture, Owen Kiser, State Department of Agriculture, Trenton; vice president for industrial arts, Harry Lesslie, supervisor for Trenton; vice president for home economics, Mrs. Anna Snyder, Tom's River; for distributive education, Lloyd H. Jacobs, state supervisor for distributive education, Trenton; for trade and industry, William McCurry, apprentice coordinator, Paterson Vocational Schools; vice president representing Life Membership, Dr. Clarence E. Partch, Dean, School of Education, Rutgers University; treasurer, Charles A. Haas, assistant director, Middlesex County Vocational Schools; secretary, George Morgenroth, assistant director of Essex County Vocational Schools.

Among resolutions passed was one urging New Jersey representatives in Congress to expedite appropriation of the full amount of money authorized under the George-Barden Act.

• North Dakota vocational agriculture staff have 100 per cent membership of agriculture instructors, state supervisors, and teacher trainers in the North Dakota Vocational Agriculture Association, North Dakota Vocational Association, and the American Vocational Association. All receive the *Agricultural Education* magazine and the *AMERICAN VOCATIONAL JOURNAL*. North Dakota believes few states can equal this record.

• The annual spring convention and election of officers of the Connecticut Vocational Association was held April 19, at the University of Connecticut at Storrs. At the morning session H. H. Ellis, delegate to the national convention, reported a professional committee which has been considering teacher training needs, teacher certification, and salary schedules gave its report. The morning meeting theme was "New Thinking in Vocational Education." Speakers were Emmett O'Brien; A. K. Getman, chief, Bureau of Agricultural Education, New York State Education Department; and George H. Fern, managing editor, *American Vocational Journal*. The panel leader was Howard Martin, University of Connecticut. The afternoon panel, composed of business and industrial leaders, was lead by Richard W. Howes, Bureau of Vocational Education, Connecticut. Blanche M. Penn, and Mr. Martin were convention co-chairmen. All officers were reelected: Carl Gray, president; Joseph Daly, secretary; W. E. Schaher, treasurer.

• The 1947 national convention of the Future Farmers of America will be held October 19-22 in Kansas City, Mo. This year the convention will feature the organization of a national FFA band composed of two farm boy musicians from each state association. Dr. Harry Brunner, secretary-treasurer of the Pennsylvania Vocational Association, is in charge of this national band.

• Illinois Vocational Association held its annual convention April 10, 11, and 12, in Peoria. Speakers at the general meeting were Vernon L. Nickell, superintendent of public instruction, Illinois, and L. H. Dennis, executive secretary of the American Vocational Association.

Schools

(Continued from page 25)

Allen or Weidenhoff, tune up tester—Allen or Weidenhoff with all meters, etc., bench press, armature lathe, mica undercutter, vises, growler, gas analyzers, Delco Remy distributors—Chevrolet, Auto Lite distributors—Plymouth, spring tension gage, hand tools, wiring diagrams—AEA, manuals, battery testers, timing lights, Delco Remy boltage regulators, Auto Lite boltage regulators, electric drill, gear pullers, soldering irons, storage batteries, live engine on stand, cut away sections, portable lights and extension cords.

Front end and brake clinic equipment: Bear front end correction equipment, wheel balancer, work benches, Barrett brake equipment (complete) hand tools, drop lights. charts, projector and screen and films.

• Apprenticeship Session in Vermont in June

The third annual Eastern Seaboard Apprenticeship Conference will be held in Manchester, Vermont, June 12, 13, and 14, with headquarters at the Equinox House.

Each year the State Apprenticeship Councils of Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, and New York arrange these conferences, in cooperation with the Apprentice Training Service of the U. S. Department of Labor. They are devoted to discussion of problems affecting apprenticeship, new developments in the field, and the interchange of ideas and techniques in the training of skilled craftsmen.

Leaders from management, labor, education, trade associations, training directors, the Veterans Administration, members of state apprenticeship councils, state directors of apprenticeship, and others take part.

The Vermont State Apprenticeship Council is host this year and has arranged the following subjects for discussion.

Thursday: Related Instruction for Apprentices, Veterans in Apprenticeship, Problems of Apprentice Supervisors and Training Directors, Apprentices in the Paper Industry; Apprentices in Aircraft Manufacture and on Airlines; Automotive Industry Apprentices, State Apprenticeship Councils.

Friday: Apprentices in the Textile Industry, Building Industry Apprentices; Apprenticeship on the Nation's Railroads, Machine Tool Industry Apprenticeship Committees, General Meeting and Annual Banquet.

Saturday: Printing Industry Apprenticeship, Apprenticeship for Small Business.

Further information may be obtained from the Vermont State Apprenticeship Council, Department of Industrial Relations, Montpelier, Vt.; or the Regional offices of the ATS, in Boston or New York.

Pole Top

(Continued from page 11)

tion of these lines will make this one of the permanent trade and industrial education programs.

Three-day conferences have been conducted for Co-op managers. In the spring of 1946, eight three-day area training conferences were held for 150 line crew foremen. This year's program included three district conferences for managers, a continuation of foreman training by areas, and evening trade extension classes in related technical information in every community where 12 crew members got together for a class.

The program is conducted in cooperation with the Texas Power Reserve, an organization of Rural Electric Cooperatives, and the Lower Colorado River Authority, a state agency for operating the dams, power plants, and distribution of power produced by dams on the Colorado River. The REA Cooperatives are divided into seven districts. Each district has a representative on the Job Training and Safety Committee and one member is elected at large.

Learn to Earn

(Continued from page 13)

The data is being used to plan a more varied course in homemaking education and to encourage home experiences wherever possible to strengthen the areas mentioned by the graduates. One stimulating effect has been the impetus given to work experience in the community. Members of the advanced class chose to obtain job experience (if possible) in the fields mentioned by the graduates and evaluate the experiences in which they participated. Characteristic choices of work experiences followed practices in merchandising, caring for the sick at home, waitress work, assisting with housework in homes of the community, and a few practice jobs as secretarial assistants. The enjoyment and satisfaction received from actual experience were of great value.

The information has stimulated classroom work and pointed out the importance of homemaking as a career. The penned notes of a cadet nurse, a housewife, and an office employee who each advised girls to take all the homemaking training they can get, and the WAVE who forwarded the idea that good grooming is always important regardless of the position one may hold, were especially effective.

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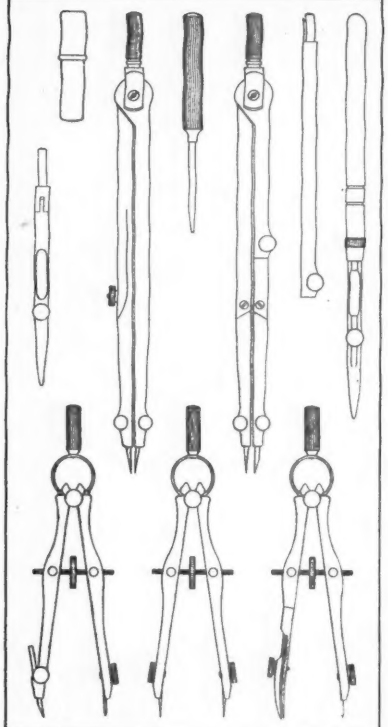

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Paging the Books

BOOKS

Homemaking

Modeling for Motherhood, by Doris Hale Heinz and Katherine Smith Bolt. John Wiley & Sons, Inc., New York, N.Y., 1946. 74 pages, $2.00.

An interestingly written and illustrated book for young women.

Home and Family Life Education in Elementary Schools, by Elizabeth Stevenson. John Wiley & Sons, Inc., New York, N.Y., 1946. 307 pages, $2.75.

The book is intended to aid teachers, student teachers, and parents of school children with home life problems.

Industrial

Welding Symbols, by Vincent C. Gourley, The Bruce Publishing Co., Milwaukee, Wis., 1947. 114 pages, $2.50.

The standards and symbols explained are those recognized by the American Welding Society. The book will be of particular interest to workmen and students in the fields of drafting, design, welding, and engineering.

Understanding Microwaves, by Victor J. Young. John F. Rider Publishers, Inc., New York 16, N.Y. 385 pages, $6.00.

The book explains the fundamental problems encountered in the field of ultra-high frequency research and production and how they are surmounted.

Industrial Arts

Rugmaking Craft, by Edith Allen. Manual Arts Press, Peoria, Ill. 96 pages.

Simple processes and designs, intended for the beginner.

Guidance

Want a Job or a Better Job? by Ingram See. The Ronald Press Co., New York, N.Y. 118 pages, $2.00.

Practical suggestions for getting a job and advancing in a chosen field.

Raise Your Sights, by Martin Panser. Prentice-Hall, New York, N. Y., 1947. 248 pages, $3.00.

The book is designed for the ambitious who want to get to the top brackets.

A Cultural History of Education, by R. Freeman Butts. The McGraw-Hill Book Co., Inc., New York N.Y., 1947. 720 pages, $4.00.

Designed for those preparing to enter the educational profession and those who wish to reevaluate their efforts in the light of a new interpretation of education in history.

General

Art for Young America, by Nicholas, Trilling, Lee, Stephan. The Manual Arts Press, Peoria, Ill., 1946. 286 pages.

An outline for a broad course in art for schools.

A History of the Problems of Education, by John S. Brubacker. The McGraw-Hill Book Co., New York, N.Y., 1947. 688 pages, $4.00.

The book aims to give a new organization to the field of the history of education.

Dental Education Today, by Harlan H. Horner. The University of Chicago Press, Chicago, Ill., 1947. 420 pages, $6.00.

A survey of the whole field of dental education.

PAPER COVERS

Suggestions to the Teacher of Occupations, by R. Floyd Cromwell and Morgan D. Parmenter. Distributed by the Psychological Corp., New York 18, N.Y.

Occupational Briefs: *Statistical Workers,* No. 185; *Export and Import Workers,* No. 186; *Packaging Industry Workers,* No. 187; *Metal Mining Workers,* No. 188. Science Research Associates, 228 S. Wabash Ave., Chicago 4, Ill. 4 pages, 15¢ each.

A Workbook Course in Business English, by Kate M. Monro. McGraw-Hill Book Co., Inc., New York, N.Y., 1947.

Practical Exercises in Business Arithmetic, by James L. Twohig. D. C. Heath & Co., Boston, Mass., 1947.

Specialized Training Programs in Business Education for Veterans. Courses in Transportation, Supply, Insurance, Real Estate, Small Business Operation. Business Education Publication No. 33, California State Department of Education, Sacramento 14, Calif.

Handbook for Shop Teachers. The University of Texas Division of Extension, Industrial and Business Extension Training Bureau in cooperation with the State Board for Vocational Education, Trade and Industrial Division.

A Program for Progress, presented by the State College of Washington, The Institute of Technology.

Beauty Culture as a Vocation, and *The Food Trades as a Vocation.* Connecticut State Department of Education, Bureau of Vocational Education.

Utilizing Human Talent, by Frederick B. Davis. American Council on Education, Washington, D. C.

100 Selected Books Now Available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D.C.

Retailing in the Future, Dr. Wenzil K. Dolva. An address given before the Business Education Section of the AVA, convention in St. Louis, 1946; copies now available from the U. S. Office of Education Business Education Service, Washington 25, D.C.

New Group II Requirements for the State High School Diploma in Business Subjects. University of the State of New York Bulletin, Albany, N.Y.

Your Life in the Machine World, by Leighton A. Wilkie, The DoAll Co., Des Plaines, Ill.

Radar, What It Is, by John F. Rider and G. C. Baxter Rowe. John F. Rider Publisher, Inc., New York 16, N.Y.

Engineering Science and Management Training, Final Report. Federal Security Agency, U. S. Office of Education, Washington, D.C.

Careers in the Skilled Trades, by I. David Cohen. The B'Nai B'Rith Vocational Service Bureau, Washington, D.C.

Employment Opportunities in the Navy Department for Scientists and Technicians. Scientific Personnel Bulletin issued by the Navy Department, Washington, D.C.

Bigger Profits with Better Menus. New York State Restaurant Association, Inc., 369 Lexington Ave., New York, N. Y., 80 pages, $1.50.

How to Find and Apply for a Job, by R. G. Walters. South-Western Publishing Co., New York City, N. Y. 84 pages, 45c.

Industrial Planning, A Safeguard of Peace, by J. Carlton Ward, Jr. Aircraft Industries Association, 610 Shoreham Bldg., Washington, D.C.

Vocational Education Teacher Improvement. Department of Vocational Education, Cleveland Public Schools, in cooperation with the State Department of Education, Division of Vocational Education, Trades and Industries, Columbus, O.

By Transcription . . . 1947 Radio Scripts prepared by staff members of the division of vocational education for use in broadcasting Ohio's current vocational education program. Department of Education, Division of Vocational Education, Columbus, Ohio.

Opportunities for Youth in Air Transportation. Air Age Education Research, New York, N.Y.

Adult Education in Vocational Agriculture in 1947 for Illinois Farm Veterans and other Adult Farmers. University of Illinois Bulletin, Urbana, Ill.

A Part for You in Shaping Tomorrow. Camp Fire Girls, Inc., 88 Lexington Ave., New York 16, N.Y.

Veterans

(Continued from page 20)

second-hand cars, books, office equipment, and motion picture bookings, all on straight commission. Several worked in retail establishments.

Current problems in dealing with customers were brought to class and discussed. Those who got the most from the course were the ones who practiced selling earnestly.

A healthy enrollment as retail majors in the freshman and sophomore courses points to a possible ease in the supply of teachers for distributive education. Fairmont State College offers a full major in retailing. It consists of 30 semester hours, plus six hours of "experience in merchandising" for prospective teachers. This work experience counts toward the West Virginia State requirement of 2000 hours (approximately two years of regular employment), for certification as a teacher-coordinator in the distributive occupations field. Students who prepare to teach will take 22 hours in professional courses, 12 of which are specifically for distributive education coordinators. These 12 consist of organization and administration of distributive education (2 hours), coordination and supervision of distributive education (2 hours), developing instructional material (2 hours), and observation and practice teaching of distributive classes (6 hours). The total of 58 hours (36 in the retailing major and the 22 in professional courses) for distributive education candidates leaves 70 hours for other college requirements and electives for a regular college degree from Fairmont State College.

Navy

(Continued from page 15)

That there may be no misunderstanding, let it be definitely stated here that a member of the Naval Reserve is a civilian; that though he enlists for a four year term he may resign at any time (except during a national emergency) and that he cannot be compelled to attend instruction periods or take cruises. The worst that can happen to him in the event that he does not justify his undertakings in these respects, is that he will be asked to resign. He is paid for the time spent in training. The time involved is not likely to interfere with education or social or family life. In the case of the Air Reserve, it will take up only two weekend days per month; in the case of the Surface and Submarine Reserve, one evening per week; each providing also a two week cruise. There is no cost involved, since uniforms are provided by the Navy, and active members will draw full pay and allowances for drills, etc.

Young men who are vocationally trained in occupations related to Navy rates have an opportunity, in joining the Naval Reserve, to benefit in many ways. Leaders in vocational education are urged to bring these opportunities to their attention. All Naval Reserve activities and Naval Recruiting activities will be pleased to provide detailed information about the Navy's Vocationally Trained Non-Veteran Reserve Program.

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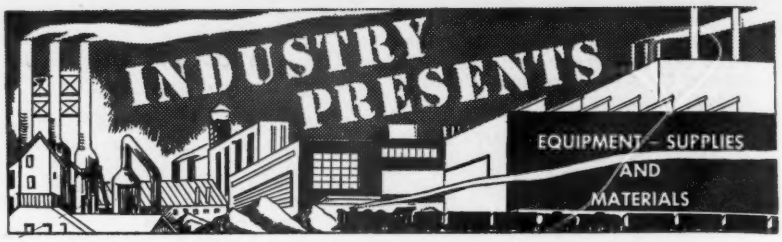
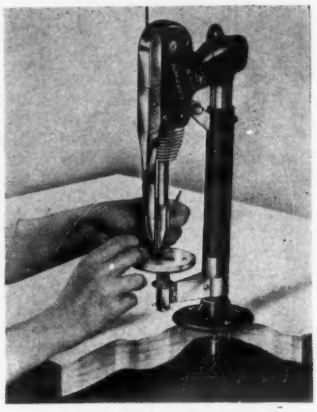
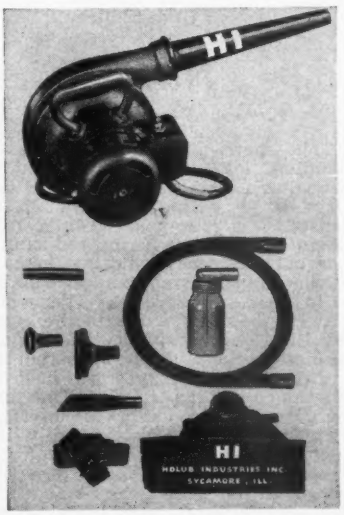


As a service to our readers we present this round-up of new equipment, materials, and catalogs of interest to vocational educators. For further information write to the AMERICAN VOCATIONAL JOURNAL, 220 E. 42nd St., New York 17, N. Y.

South Bend Lathe catalog No. 13-F, just off the press, illustrates in full color the 13-inch swing South Bend quick change gear and toolroom lathes. This lathe features a quick change gear box which makes immediately available gear combinations for cutting 48 pitches of screw threads, right-or left-hand, and 48 power longitudinal feeds and cross-feeds. The various gear box lever settings are easily selected from an attached direct reading index chart. Also featured on the 13-inch lathe is a double wall apron which is equipped with a friction clutch to operate the power longitudinal feeds and cross-feeds. The lathe headstock is back-geared and is equipped with a super-finished spindle, adjustable precision bearings, and an efficient oiling system. The fully closed motor drive provides eight headstock spindle speeds ranging from 34 to 875 r.p.m.



The Verti-Mount, a patented treadle accessory for use with the Eject-O-Matic automatic feed soldering iron, has just been put out by Multi-Products Tools Co. It can be operated by foot action alone leaving both hands free to hold work. It consists of a vertical steel column with a flanged base at one end for attaching to the work bench and a positive clamp at the other end for holding the Eject-O-Matic soldering iron. A steel rod connected at one end to the mounting clamp, extends down the vertical tube and through a hole drilled in the bench. The lower end of the rod is linked by means of an adjustable chain to a foot treadle which is hinged to the floor.



Holub Industries have a new No. 77 blower and cleaner for cleaning motors and generators, all types of machinery, stock bins, ventilating equipment, food processing equipment, elevator equipment, refrigerator condensors, radiators, coils, motors, unit compartments, ice cream cabinet condensers and motors, bakery equipment, communication equipment, business machines, oil burners, ovens, furnaces, automobiles, etc. The machine reduces fire hazards and will help in providing better and healthier working conditions.

Magnecord, Inc. has a high fidelity wire recorder, the first to be produced in this country. The instrument incorporates the principles developed by the Armour Research Foundation. It is designed for professional users and has a frequency response flat within 2db from 50 to 12,000 cps with a signal-to-noise ratio over 45 db.

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Research Bulletin No. 1 — Occupational Adjustments of Vocational School Graduates. 1940. Pp. 132. Price 10 cents each; 10 or more, 5 cents each.

SURVEY FORMS for use in making local or area studies of graduates and former students of industrial, home economics, or agricultural education schools or departments; useful to occupational guidance, training, and placement programs. 1940. Pp. 4 ea. Prices: 10 copies, 15 cents; 100 copies, $1.05; 1,000 copies, $8.25.

Research Bulletin No. 2—A Study of Industrial Teacher Education at the Graduate Level. 1941. Pp. 42. Price, 10 cents each; 10 or more, 5 cents each.

An Enlarged Program of Vocational Education With Special Reference to Larger Administrative Units. 1943. Pp. 52. Price, 40 cents each; 10 or more, 35 cents each.

Improving Instruction in Industrial Arts. 1946. Price, 25 cents each; 10 or more, 20 cents each.

State Supervision of Industrial Arts Education. 1946. Free.

America's Vocational Schools. 1945. Pp. 56. Prices: single copies, 20 cents each; 100 or more, 15 cents per copy; 1,000 or more, 13 cents per copy.

The Carry-Over Into Homes of the Teaching of Family Living to In-School and Out-of-School Youth. 1943. Pp. 17. Prices: 1 to 9 copies, 20 cents each; 10 to 99 copies, 15 cents each; 100 or more copies, 9 cents each.

Evaluative Criteria for Vocational Education in Agriculture. 1942. (Revised). Pp. 75. Prices: 20 cents each; 10 or more copies, 15 cents each.

Manual of Directions for Use with "Evaluative Criteria for Vocational Education in Agriculture, 1942 Revision." 1943. Pp. 15. Prices: 1 to 9 copies, 10 cents each; 10 to 99 copies, 9 cents each; 100 or more copies, 8 cents each.

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Trade Tests

(Continued from page 12)

This method of testing is more closely related to that which has been used in industry than any of the methods previously described. The chief advantages are that it is practical and is the most free of any danger of coaching. It is possible to determine accurately the skill level by the length of time necessary to finish the job. This removes the disadvantage of the test being subjective as far as grading the finished article is concerned. This test, also, will very easily test the person unable to speak English. It is more expensive and requires more time to administer as a great deal of equipment must be set up to demonstrate ability in a few operations.

It is possible to prepare a thorough performance test by combining many minor operations and several major operations into one trade job. In order to do this it will be necessary for the testmaker to be thoroughly schooled in job analysis, and have a knowledge of the trade gained by practical experience.

The success of vocational students in industrial jobs depends largely upon the adequacy of the training they have received while they were students. Teachers in the field of general education have long made use of achievement tests to determine student achievement. Only within the last few years have teachers started to make use of such tests as have been described in this article. "Tailor-made" tests, when constructed through joint efforts of vocational teachers, school administrators, coordinators and representatives of the industries concerned, furnish ideal means of facilitating the coordination between industries and schools that every community desires to encourage. Passing of a trade test might very well, then, be the criteria for graduation from a vocational school. It would prove that the person had the necessary training to enter industry.

A second and more important value of trade tests is to determine the level of proficiency. It is very costly to the company in time and money to guess at the proficiency of its applicants. A Philadelphia company had 11,988 replies to advertisements for salesmen; 46 per cent made appointments, 33 per cent actually came, 4.4 per cent were hired, and only .7 of one per cent made good on the job.

Trade standing must finally be determined, not by number of years of training, but by the exact and absolute amount of knowledge and skill possessed by the tradesman.

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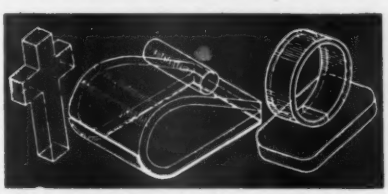

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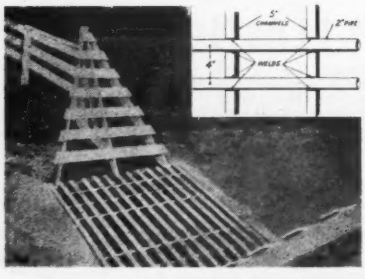

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Who's Who

Hazel Hatcher, formerly home economics teacher trainer at Michigan State College and more recently in Chile as consultant in their curriculum planning program, has joined the staff of the Pennsylvania State College.

Norman Crouch has been appointed assistant director of veterans education, Missouri State Department of Education. He formerly was coordinator of diversified occupations at Warrensburg, Mo.

George Kohrman, director of industrial education, Missouri State department of Education, will be guest professor at Missouri University this summer. **Doyle Kemper,** state supervisor of Industrial Arts, will conduct courses at the A & M College of Texas.

Harold Lehto, assistant state supervisor of business education in Minnesota, has joined the vocational staff of the St. Paul schools. He has been succeeded by **Lillian L. Biester.** Other appointments to the state Business Education staff as assistant supervisors are **Ellsworth Outwin, William Pickell, Ben McWhirter,** and **Donald Whitmore.**

Aubrey L. Crossland has been made professor of agriculture at West Texas State College. He was formerly an instructor at Commerce and was first vice president of the Texas Vocational Association in 1945-46.

Rosa Jean Tannahill, formerly area supervisor of homemaking in Texas, has accepted a position as head of the homemaking department at Mary-Hardin Baylor College for Women at Belton.

M. A. Darrow has been appointed trade and industrial teacher trainer for A & M College of Texas. He formerly was with the Hadley Vocational School in St. Louis.

C. R. Eddins who has taught in Galveston and Corpus Christi, has been appointed district supervisor of trade and industrial education for the Gulf Coast area of Texas.

Percy Kirk, formerly of Sheridan, was appointed state supervisor of agricultural education for Wyoming and state adviser of the FFA, on February 1.

J. J. Brown, director of vocational rehabilitation for Texas and vice president of the AVA, spoke before the South Carolina Teachers Association in Columbia on March 13.

E. L. Austin, agricultural education teacher trainer, Rhode Island, will conduct a workshop in "Radio in Education" at Boston University in July. A staff from the four major broadcasting systems will assist, and an enrollment of 200 is expected.

Carl M. Horn, chief of occupation-information and guidance, Michigan, will become associate professor in the institute of counseling, testing, and guidance, Michigan State College, July 1. He will also assume some responsibilities for the dean of students.

C. V. Roderick, formerly district supervisor of agricultural education in Missouri has been appointed assistant professor of agricultural education, University of Missouri.

Carl M. Humphrey has been appointed district supervisor of agricultural education in Missouri. He was formerly instructor at Odessa, Mo.

In Tribute

Homer T. Ragle, assistant supervisor of industrial education in Missouri from 1944 to 1946, and director of vocational education in Springfield since that time, died suddenly January 26.

Mrs. Harold G. Wilson, wife of the Kentucky state supervisor of industrial education, died January 2. Mrs. Wilson was engaged in the teaching profession for many years.

Ramona Beall, director of the educational division of Dictaphone Corp., died March 23. She was founder and publisher of the **Dictaphone Educational Forum.**

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Skill Subjects

(Continued from page 10)

The statements which follow are the responses of the department heads who said, "No, the high school student who wants to become a commercial teacher should not study skill subjects in high school." Statements one to six are listed in the order of importance, determined by the number of times they were mentioned by the respondents. Statements seven to 13 were each mentioned only once. Statement one is a summary of the opinions of 23 per cent of the individuals responding to the questionnaire.

1. Our best students in the department are those who come to us with 12 or more solids in high school. They have a good background in English, mathematics, history, science, and language. With that beginning we achieve better results in teaching shorthand, typewriting, secretarial science, and accounting to them than to those who have had shorthand and typewriting, but are weak in English and other subjects which they should have gotten well in high school. The prospective teacher should get a broad program in high school, rather than narrow vocational specialization. It produces a richer finished product. Every hour spent on skill subjects in high school will be one lost to general educational background and this is already inadequate to do a good general education job at this level. Specialization at both levels already is the chief weakness of our commercial teacher-training programs. Our greatest weakness today is not lack of skills but lack of breadth and preparation. Our specialization must be placed on a good, solid foundation.

2. If he studies skill subjects in high school, he will have less time to devote to general education. General education courses are crowded out if specialization begins too early. Nothing should interfere with the best general education job at this level.

3. That he learns the skills in the way that college thinks they should be taught is a distinct advantage to him. If he is not successful in "skill subjects" in his first semester or first year, it is not too late to switch to social-business subjects or to another field.

4. The college student must devote part of his college time to specialization in skills, which results in overlapping.

5. He will learn the skills in less time at the college level under better learning conditions (selection of students) and his general education gained in high school will help him in all of his college work, including the skill subjects.

6. Skill subjects should be taught nearest to the time of their use.

7. Some good students acquire slothful habits in high school by reason of work being geared to the rate of learning or ability of slow students or those with too little aptitude for the skills being taught.

8. Some states require that a commercial teacher show a certain number of college hours in the teaching subjects on his transcript.

9. If the student spends too much time sampling "skill subjects" while in high school, he may find that he has deficiencies to make up when he enters college. That means starting with a handicap and his counsellors should see that this does not happen.

10. If he expects to enter a university that provides no instruction in skill subjects, he can learn them in intensive courses in summer sessions in some outstanding business college.

11. Too many students who took all the commerce courses they could in high school want to take as little as they possibly can in any other department of college. The social problems of the day, the non-vocational interests of the prospective teacher, and the upgrading of commercial work are matters of great importance.

12. During the four-year college period there should be room for necessary skill courses.

13. More mature students learn better and faster.

14. It is doubtful if the high school student can be sure just which skills, if any, she will need to possess as a commercial teacher until college is reached.

15. Specialization is not deemed desirable in other teaching fields at the high school level.

Two individuals responded with a very definite, "It depends:

"1. Entirely upon the high school from which the prospective teachers graduate. Graduates of some high schools are well prepared in the skill subjects and are able to enter advanced classes in college without difficulty. Records show that the graduates of other schools are invariably poorly prepared in the skill subjects, and must start with beginning classes in college.

"2. Upon whether or not the college of the student's choice will accept technical business subjects for entrance credit."

There are many implications for each of the three divisions of this opinion survey. It is hoped that each business education teacher will benefit from a serious consideration of these implications, and reflect on his beliefs.

Products and Services Guide

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M-47

WHAT DO YOU THINK?

WHAT are some trends in vocational education today?

The word means "to take a particular direction." Too frequently trends are considered only from the positive aspect. There are trends apparent today which can affect vocational education adversely and should not be either minimized or ignored. We may realize disastrous effects if we wait until such trends become actual conditions; we may even find that we no longer have the vocational philosophy and program which we have created and preserved during the past years.

When a trend becomes evident it should be weighed, analyzed, and some decision reached as to its probable influence. Then forces can be brought to bear which will encourage or prevents its development.

Today's trends should not be viewed with apathy. Some definitely promise much for the future and should have enthusiastic, vigorous, and evident support; others, cogent opposition if we are to avoid inimical results.

SOME of today's trends are listed here for consideration. Their ultimate force depends upon our attitude and our action.

1. The George-Barden Act. This makes possible the expansion of vocational education in nearly all existing fields, and opens the way for new types of programs. Many states are active and articulate in their efforts to obtain the appropriations which the act makes possible.

2. The Federal study of grants-in-aid programs. This involves all grants for health, education, public works, and road and airport construction. It is to determine to what extent revised standards for the distribution of these grants may take into account more fully the needs in various parts of the country. The Bureau of the Budget, Council of Economic Advisors, Federal agencies concerned, and state and local advisory committees are making the study.

3. Creation of a Cabinet Department of Health, Education, and Security to supersede the Federal Security Agency—a plan now before Congress.

4. The Prosser Resolution which calls for an educational plan for the "60 per cent" group. (See "What Do You Think?" April, 1946.)

5. Establishment of a workers education program within the U. S. Department of Labor.

6. Growth of the apprentice training program, as indicated by current national statistics.

7. General vocational education rather than specific vocational education on the secondary level.

8. Postponing of specific vocational education until the post high school level, or 13th and 14th grades.

9. Increased emphasis on and expansion of vocational-technical education.

10. Area vocational schools—by whatever name.

11. Increased emphasis on cooperative programs; work-and-school programs.

12. Standardization on a national basis of related instructional materials for apprentice training and other occupational training programs.

13. Expansion of vocational guidance programs in all fields of vocational education, with increased Federal and state funds.

14. Real research in the various fields of vocational education.

15. Standardization of vocational teacher qualifications (minimums) throughout the states.

16. More responsibility for vocational education placed on the states by the U. S. Office of Education.

17. Desire of general educators to lower the standards of vocational education and dilute the program, or spread it thin in order to "expose" more students to general vocational activities.

18. Reorganization of the vocational division of the U. S. Office of Education.

19. On-the-job training (especially for veterans) in the different fields of vocational education.

20. Inclusion of more academic work in vocational programs without validated study of what and how much.

21. Training schools established by business and industry.

22. Expansion of private vocational schools, especially since the G.I. Bill of Rights became effective.

23. Possibility of universal military training.

24. Reserve training programs of the Armed Forces.

25. Operation of vocational and vocational-technical courses below college level by colleges and universities.

26. Foreign nations, both in South America and Europe, are utilizing the knowledge and experience of our vocational leaders in establishing a pattern for their own vocational programs in an effort to rebuild or strengthen their economies. Yet there is no representative of vocational education on UNESCO.

27. Large veteran enrollment in college programs. Some are dropping out; thousands will be completing their courses at the same time. Will the professions be able to absorb them or will a re-training program be required to fit their training into the occupational fields where it will be most useful? While this may not yet be a trend, some thought may well be given to the possibility.

28. Possibility of elimination of special appropriations for vocational education and the substitution of one Federal appropriation for public education.

THESE are some of the "straws in the wind" today. There may be others of equal significance which are not so clearly apparent. Some of the points listed here are accomplished fact rather than trends, but they seem to point a trend, or one easily may emerge, and we should not cease our vigilance.

Major developments do not happen by mere chance. Somebody shapes the course of events. Can we afford to let significant trends or tendencies or philosophies expand and perhaps bear fruit without making our analysis and letting our voice be heard?

What do you think?

George H. Fern

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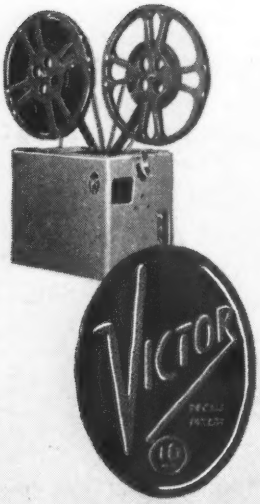

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